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ATHLETIC SPORTS FOR BOYS:

A REPOSITORY

OF

GRACEFUL RECREATIONS FOR YOUTH.

CONTAINING
COMPLETE INSTRUCTIONS IN GYMNASTICS, LIMB EXERCISES, JUMPING, AND POLE LEAPING. ALSO FULL DIRECTIONS FOR THE USE OF DUMB BELLS, INDIAN CLUBS, PARALLEL BARS, THE HORIZONTAL BAR, THE TRAPEZE, AND THE SUSPENDED ROPES; AND IN THE MANLY ACCOMPLISHMENTS OF SKATING, SWIMMING, ROWING, SAILING, RIDING, DRIVING, ANGLING, FENCING, AND THE BROADSWORD EXERCISE.

SPLENDIDLY ILLUSTRATED WITH 194 FINE WOOD-CUTS AND DIAGRAMS.

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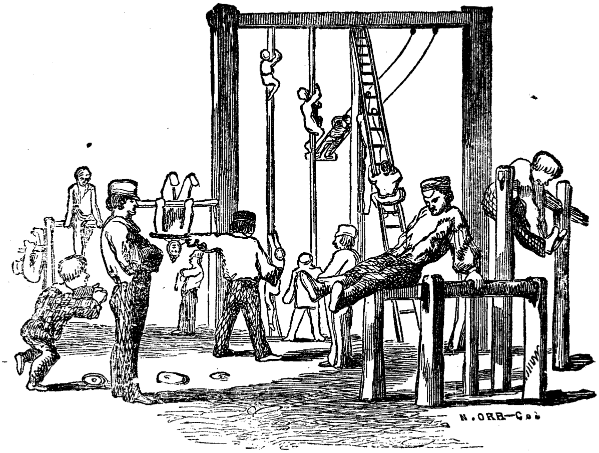
ATHLETIC SPORTS FOR BOYS.



Gymnastic exercises may be begun by a boy of about eight years of age, or may be commenced at any age; but, in all cases, he should begin gently, and proceed gradually, without any abrupt transitions. They should be commenced before breakfast in the morning, or before dinner or supper; but never immediately after meals; and the pupil should be very careful, after becoming heated by exercises, of draughts or cold, and especially refrain from lying on the damp ground, or from standing without his coat or other garments; and rigidly guard against the dangerous practice of drinking cold water, which, in many instances, has been known to produce immediate death.

A proper practice of, and mastery over, the feats of Gymnastics, serve to develop the muscles, and are preparatory to the proper performance of all athletic sports and exercises. What we propose to show, are feats as may be performed by any lad, without expensive apparatus, and without a teacher; and which will be amusing as well as healthy to the performer. These are preliminary to other and more pleasing exercises; for fencing, rowing, riding, etc., are gymnastic feats of a more advanced kind. We shall commence with Marching, and so advance through the whole round.

MARCHING.

It is not necessary to say any thing about the ordinary mode of walking, which should be easy, free, and natural; or about the Indian lope, which is used in fast walking, the body being thrown forward, and the strides long; but the principles of the military step should be explained, as a good preparation for gymnastic exercises.

The boys should choose a captain, who should be a rather bright fellow, and he must study out thoroughly the following, so as to be able to drill the rest, who act as his company. He should first teach them the position and facings, and then the principles of the step. In giving out the words of command, he should pronounce the first word, or words, if there are two or more, slowly, by way of caution, and the last word quick and sharp. The moment the boys hear the first word they should get ready, and then execute the command when the second word comes. If the command consists of one word only, the last syllable is the part to be obeyed, and the first the caution.

The Position.—At the word of command, "Atten—*tion!*" which should be pronounced with the last syllable accented, every boy will stand in this way:

His heels on the same line, and touching each other.

The feet turned out equally, so as to make a shape like a broad letter V

The knees straight, but not stiff.

The body erect, but inclining a little forward.

The shoulders square.

The arms hanging naturally.

The elbows near the body.

The palm of the hand turned a little to the front, with the little finger resting on the seam of the pantaloons.

The head erect and square to the front, but not stiff nor constrained.

The eyes looking straight to the front, and at a spot on the ground about fifteen paces off.

Each boy will place himself so that he can touch the left side of his right-hand neighbor, without jostling him, by raising his elbow slightly, take the position given, and wait for the next word of command.

The captain will now give the word, "Eyes—*right!*" At the word *right*, each boy will turn his head gently and quickly, so as to bring the inner corner of the left eye on a line with the centre of his breast, so as to look down the line of boys on that side. But he must not move his body or his shoulders. The head must turn, as it were, on a pivot.

At the word "*Front!*" the head will be brought back to its former position.

At the word, "Eyes—*left!*" the head will be turned to the left, in the same manner as was previously done to the right.

At the word "*Front!*" the head will take its former position.

At the word "*Rest!*" each boy may stand in any easy way he likes, but will not step out of his place. Whenever the word "Attention!" is given, he will take the position before taught.

The Facings.—The next thing is the facing to the right and left. At the word "Right—*face!*" each boy will raise the right foot slightly, turn on the left heel, raising the toes a little, and then replace the right heel by the side of the left, on the same line. This will bring the boy in a position at right angles to the right, with the way he stood before.

At the word "Left—*face!*" he will raise the left foot slightly, turn on the right heel, raising the toes a little, and replace the left heel by the side of the right, on the same line. This will place him on the left, at right angles with his former position.

To turn completely around, the word is, "About—*face!*" At the word *about*, each boy will turn on the left heel, bring the left toe to the front, carry the right foot to the rear, without turning it, the hollow of that foot opposite to, and about three inches from, the left heel, the feet at right angles with each other. At the word *face*, he will turn on both heels, raise the toes a little, extend the hams, face to the rear, and, at the same time, bring the right heel by the side of the left. He must take care, at the same time, to keep his body as square as possible, these motions being done with the feet.

The Step.—Having learned the position and facings, each boy will now exercise the step. To do this the captain will give the word, "Forward—common time—*March!*" At the word "*Forward!*" each boy will throw the weight of the body on the right leg, without bending the left knee. At the word "*March!*" he will carry his *left* foot smartly forward to the length of this step,* the sole near the ground, the ham extended, the toe a little depressed, and slightly turned out, the knee also slightly turned out; he will, at the same time, throw the weight of the body forward, and plant flat the left foot, without jarring or shocking the leg, precisely at the distance where it finds itself from the right when the weight of the body is brought forward, the whole of which will now rest on the advanced left foot. The right foot will next be brought forward in the same manner, without striking one leg against the other, or turning the shoulders, and with the face kept to the front. This will be repeated until the word "Halt!" At the word "*Halt!*" the foot in front will be put to the ground, and the other foot brought up to it, and there remain.

To practise this properly, the boy who acts as captain should either cry "one," as the left foot is set down, and "two," as the right foot is brought to the ground; or use the words "left! right!" in the same manner, thus marking the time.

Common time is ninety steps to the minute; the time of the quick step is one hundred and ten to the minute. The captain can learn this cadence by counting with a watch before him, and the other boys will get it by practice.

---

*In a man this would be twenty-eight inches, from heel to heel; and it is proportionately less for boys.

The quick step is executed in the same way as the step in common time; but the time is not named in the command. The word is "Forward—March!" and when it is given without the time being mentioned, it will always be the quick step.

The double-quick step is faster, and is, in fact, a slow run, in the time of one hundred and sixty-five steps to the minute. Before commencing this, the boys will be taught the principles of the step by being exercised in marking time, which is a funny but necessary proceeding.

The word is "Double-quick step—*March!*" At the word "Double-quick step!" each boy will raise his hands to a level with his hips, the hands closed, the nails toward the body, the elbows in the rear. At the word "March!" he will raise to the front his *left* leg, so bent as to give the knee the greatest elevation, the part of the leg between the knee and the instep being kept perpendicular, the toe depressed; he will then replace the foot in its former position, and execute the same movement with his right leg, and so on, alternately, *without moving forward*, until the word "*Halt!*" when he will bring the foot which is raised by the side of the other, drop his hands by his sides, and resume the position he would take at the word "Attention!"

When the captain has practised the boys for some time in marking time in this way, he will set them to execute the step itself. The word is "Forward—Double-quick—*March!*" At the word "*Forward!*" each boy will throw his weight on the right leg. At the word "*Double-quick!*" he will place his body just as he would do at the command "Double-quick—Step," in marking time. At the word "March!" he will carry forward the left foot, the leg slightly bent, the knee somewhat raised; will plant his left foot, the toe first, at the quick-step distance;* and then do the same with the right foot, throwing the weight of the body on the foot that is down, and giving the arms a slight natural motion. This will be done alternately until the word "Halt!" when the boy will stop in the same manner set down for the other steps.

In executing these manœuvres the line of boys should be taught to dress—that is, to align itself, or keep itself straight. To do this properly, the captain will number the boys, from right to left, and each boy will learn to know his number. He will then place No. 1 and No. 2 on the right, two paces in front of the line of boys, and, having put them in a perfect line, just so close that they can touch each other's elbow, without opening their own, but not so close that they jostle each other. He will now call out, "Number Three!" At the word, No. 3 will march forward two paces in quick time, shortening the last pace so as *to be about six inches behind the line.* He will move up by steps of two or three inches, quickly and steadily, until he reaches the side of No. 2, and, with his *eyes* to the right, without removing his shoulders from their square position, will see that he is in exact line, and at the same time that he can touch slightly the elbow of No. 2. Then No. 4 will go through the same movement at the word, and so on. When this has been practised for some time, the boys will be able to align themselves easily at the word of command. This, if the boys are desired to dress toward the right, is "Right—Dress!" If toward the left, is "Left—Dress!" As soon as the rank is aligned, the captain gives the word, "Front!" when the head and eyes are brought square forward again.

---

* **This, in a full-grown man, would be thirty-three inches.**

If the boys are marching in quick, or double-quick time, and they want to face about, without halting, the word is, "Right about—March!" At the word "*March!*" which must be given at the instant the *left* foot is coming to the ground, each boy will bring this foot to the ground, and by turning on it, face the other way. Then he will put down his right foot, and step off, left foot forward, in the new direction.

It is necessary to particularly remember—1. That where there is no time mentioned between the word *Forward* and *March*, the quick step is always to be used.

2. That the order for marking time in the double-quick may be distinguished from the order to march in the same step in this way—it has no "*forward*" before it, and the cautionary word is "Double-quick step," instead of "Double-quick." Thus, to mark time, the word is "Double-quick *step*—March!" while to march in the same time, the word is "*Forward*—Double-quick—March!"

3. The command "About face!" is to turn each boy to the opposite face, when he is at a halt; and the command "Right about!" when he is marching.

RUNNING.

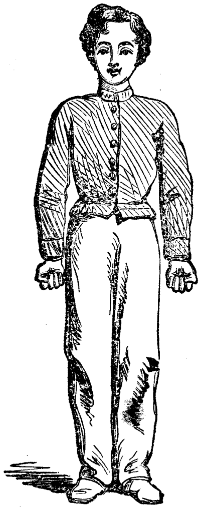
In running, you go through the same motions as the double-quick step in marching, but you increase the swiftness of your motion accordingly.

LIMB EXERCISES.

Independently of the walking and running, there are exercises of the arms and legs which are worthy attention; and may either follow or precede the learning of the step.

The boys are to be brought by their captain to the attitude of "Attention."

First Arm Exercise.—At the word *one*, throw out the palm to a line with the body, and raise the arms slowly, without bending the elbows, till they are horizontal with the shoulder, and the boys stand in the form of the letter T, the palm of the hand pointing downward; at the word *two*, bring the arms down sharply into the first position. (*See Illustration.*) Remember that all the boys must be taught to keep exact time in their exercises—and the word of command must help them to this—the word *one* being given slowly, and *two* sharply. Thus: oo-nn-ne, *two*, oo-nn-ne, *two*, and let each exercise be repeated till the boys learn to do it all together, smartly and well.



FIRST POSITION—ATTENTION!

Second Arm Exercise.—At the word *one*, bend the right elbow, without moving the upper part of the arm, and bring the fist up in front of the shoulder, with the knuckles toward the shoulder; at the word *two*, drop the arm to the former position. Repeat—one, two; one, two; the same exercise with the left arm; the same with both arms. (See Fig. 1.)

Third Arm Exercise.—At the word *one*, raise the right arm as in the last exercise; at *two*, bring it straight up beside the head (fist doubled), *three*, return to the same position as at *one; four*, drop a[illegible] to position of attention. Repeat—one, two, three, four; one, two, three, four; same exercise with left arm; same with both arms. (See Fig. 2.)

Fourth Arm Exercise.—At the word *one*, raise the right arm as in the second exercise; *two*, stretch it out horizontally *in front* of you, as if striking a blow (knuckles upward); *one*, arm as in second exercise; *two*, strike out again. Repeat—one, two; the same with left arm; the same with both arms.

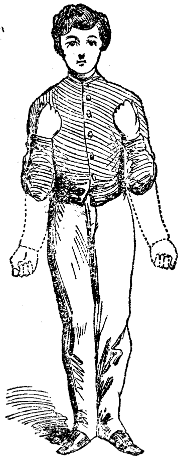


Fig. 1.

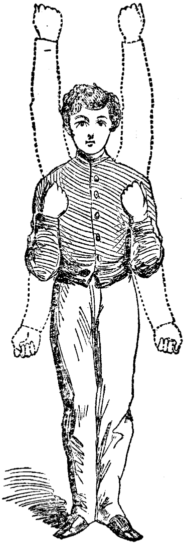


Fig. 2.

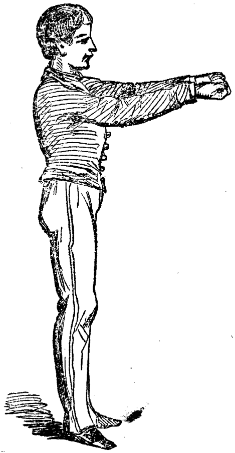


Fig. 3.

Fifth Arm Exercise.—Same as the fourth, but at the word *two* turn the arm in stretching it out so that in the horizontal position the knuckles are downward. Repeat with left arm; then with both. (See Fig. 3.)

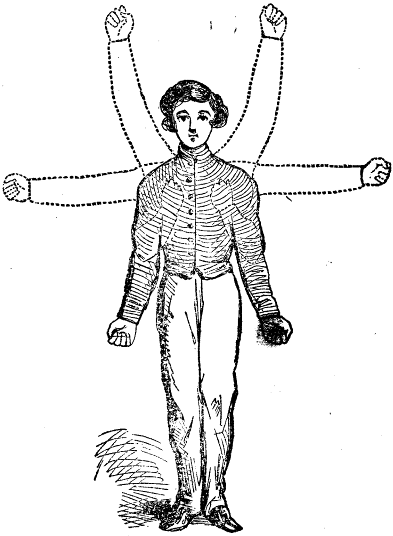


Fig. 4.

Sixth Arm Exercise.—At the word *one* double the right arm as in the third exercise; at *two* bring it straight up above the head, (fist doubled;) *three*, extend it outwards from *the side* so as to form a right angle with the body; at *four* bring the arm back to the position of *one*, striking the right lung. Repeat—one, two, three, four; one, two, three, four; same with left arm, same with both. (See Fig. 4.)

Seventh Arm Exercise.—At the word *one* raise the arm slowly forward (keeping it quite stiff till it has described half a circle and is raised above the head; at *two* complete the circle by bringing it down backward, letting the fist be as far behind the body as possible, till the hand returns to the first position. Repeat this, increasing the rapidity of the movement, as the exercise becomes more familiar, but always keeping perfect time to the word of command; the same with the left hand, and with both hands.

Eighth Arm Exercise.—The same as the seventh, but begin the circle by moving the arms backward from the body, and bring them forward in the descending half of the circle, thus reversing the movement.

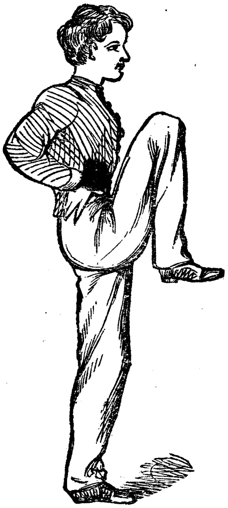
A variety of other exercises may be undertaken, all tending to give strength and suppleness to the arms; but the foreging, if perfectly understood, will be found sufficient for the purpose.

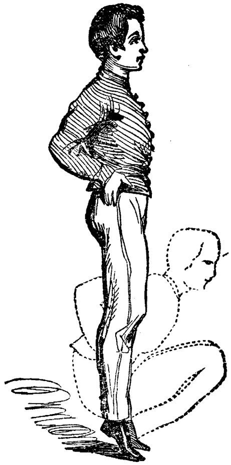
LEG EXERCISES.

First Leg Exercise.—At the word *one*, advance the left foot, keeping the knee straight, and the point of the foot a little outward, and just touching the ground; the whole of the weight of the body being balanced on the right leg; at the word *two*, draw the left leg rapidly behind the other, and repeat the exercise several times. Then go through the same with the right leg.

Second Leg Exercise.—This exercise consists in lifting each leg alternately as high as possible, the body being kept perfectly straight and steady. In all these exercises care must be taken that the boys move exactly in time.

Flexion of the Lower Extremities.—This is an important exercise, and should be executed with particular care. Bring the tops of the feet nearer together than in the usual position, and place your hands on your hips, the thumbs in the front and the fore fingers behind. Then bend the legs, keeping the body perfectly erect and the knees together. At first this bending must be only partial, but as the movement is repeated, the pupil should bend lower and lower each time, until he can assume the position shown in the engraving, and resume an erect posture, standing on the top of his toes, without moving his feet further. The head and body must be kept perfectly erect during the whole time.



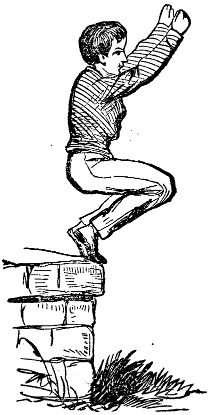


JUMPING.

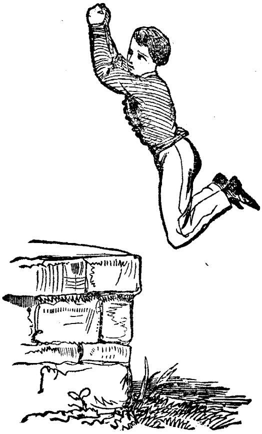
There are several ways of jumping, the principal being upward, downward, and the long leap. These should be well studied in sport, as circumstances may arise in after life in which it becomes necessary to practise them in earnest.

The Long or Horizontal Leap.—To execute this leap, the boy, without a run, must bring his feet close together, then bend his legs slightly, throwing his arms forward, with the hands closed, at the height of the shoulders. This bending of the knees must be repeated two or three times, as by this means an impetus is acquired, similar to the "accumulation of power" obtained by swinging a stone round the head with a sling two or three times before discharging it. When the requisite impulse is obtained, he must press the soles of the feet hard against the ground, and by a sudden and vigorous spring, extending his arms and his legs at once, he launches himself forward, alighting, as far on as possible, on the tips of his toes. Care must be taken to bend the legs the moment the feet touch the ground after the leap, as this deadens the shock caused by the sudden weight of the body thrown on the feet, and the weight of the spring. In this, as in all kinds of leaping, it is advisable to begin with short distances, taking care to leap neatly and gracefully, gradually extending the distance as proficiency is attained. By attempting too much at first, the learner will only expose himself to disappointment, besides getting into a slovenly way of leaping, and running the risk of a sprained ankle.

The Downward Leap.—This is a very useful exercise; and as it presents



THE DOWNWARD LEAP.



THE UPWARD LEAP.

some difficulties, it should be practised sedulously at gradually increasing heights. It is, moreover, a gymnastic operation which many have involuntarily to perform in some emergencies of actual life. The number of people annually mutilated, or even killed, by jumping down from heights, in cases of fire and similar calamities, is lamentable; and yet the majority of these might have escaped unhurt, if they had only known how to set about the undertaking. Like poor little Prince Arthur, in Shakspeare's play of "King John," they have been compelled to say:—

> "The wall is high, and yet I will leap down;
> Kind ground, be merciful, and hurt me not."

Whereas, had they known how to leap, they need not have been at the mercy of the "kind ground" at all. Proceed in the following manner:

Having mounted to the height from which you are to leap down, stand with your feet together, the toes pointed forward, not outward. Close your fists at your sides, and raise yourself gradually on tiptoe, bending the knees, and raising your hands as you do so (see Illustration); on bending for the third time, drop gently off the elevation (carefully avoiding any thing like a spring), and as you descend through the air, straighten the body, throwing the arms upward as much as possible. Directly the points of your toes touch the ground, bend the knees forward, to break the impetus of your fall. Take care to increase the height from which you leap very gradually, and never attempt a deeper jump till you are quite perfect in the previous ones.

The Upward Leap.—Bring the feet close together. Close the fists, raising them above the head, and bend the knees two or three times, to get an impulse. Jump suddenly from the ball of the foot (the heel not touching the ground), and as you rise, bring the hands rapidly down to your sides, as this will give you an additional impulse upward. Here, too, the distance of your leaps must be increased very gradually, as the effect of missing your *tip*, as it is called, may be painful and unpleasant.

Running Leap.—For a horizontal leap, with a run, the boy should start at a brisk pace, increasing as he nears the point from which he is to spring; on reaching which, he must jump forward, without a moment's pause, so as to lose none of the impulse of his run. On rising to his leap, let him press the balls of his feet strongly against the ground, throwing his fists forward horizontally in the direction of his leap. On touching the ground after the leap, the knees must be bent and the body thrown backward. The same rules apply to the upward leap, except that here the fists must be thrown not forward, but upward, as the body rises.

Two points are to be particularly observed in jumping *with a run.* The first is to bound from the ground with as much force, and the second, to alight upon it with as little force as possible. If the leaper comes down upon his heels, the whole body receives a very unpleasant shock, in which the brain partakes, and violent headache is frequently the consequence. If he comes down flat-footed, and his shoes happen to be a little short, or too flexible, he will *stump* his toes in a very painful fashion. The right way is to come down upon the ball of the foot, with both toes and heels raised, and then to bring down the heels as the legs are straightened after the jump. In a horizontal leap, the jumper sometimes finds himself thrown unpleasantly forward. This is because he has not leaped high enough off the ground, but has skimmed along it like one of the stones used in "Ducks and Drakes." But "Duck and Drake" practice in leaping is a very painful affair, frequently accompanied by "bumps" on prominent parts of the face, and bruises on the hands.

POLE LEAPING.

The pole should be made of some tough, hard wood, not liable to snap, and adapted to the height and strength of the boy, and to the length of the leaps he is to undertake.

The boy should begin with a short pole, and practise leaping without a run. Rest one end of the pole on the ground, holding it by both hands, placed near each other, a little above the head. Then spring up evenly on both feet, managing the arms so that the elbows are bent when the body passes the pole. Push yourself forward as far as possible, leaning all your weight on the pole, and continue this practice, gradually increasing the distance of your leaps.

For a horizontal leap, with a run, stand at some distance from the space you wish to clear. Hold the pole with the right hand above your head, thumb upward, and with the left hand at the height of the thigh, thumb downward. Then start with a run, keeping the lower end of the pole in front of you. On reaching the edge of the ditch, or space which you wish to jump, stick the end of the pole into the earth, and by a sudden and powerful spring, raise the body, leaning the weight on the arms as you rise, making a half turn as you clear the space, and alight on the balls of the feet, on the other side, bending the knees to break the force of the descent. The longer the distance you have to leap, the nearer the top must you grasp the pole, the distance between your hands and the lower end of the pole being in fact the radius of a half-circle, of which your feet, in leaping, describe the circumference.

Low walls and fences may be jumped by means of the leaping pole.

Here it becomes necessary to lift the feet high as you rise, so as to clear the wall, and as you descend bring the upper hand smartly down, so as to jerk the lower end of the leaping pole upward, that it may clear the wall.

DUMB-BELLS

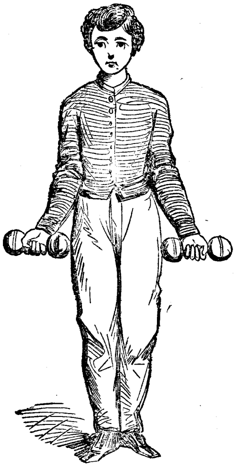


Fig. 1.

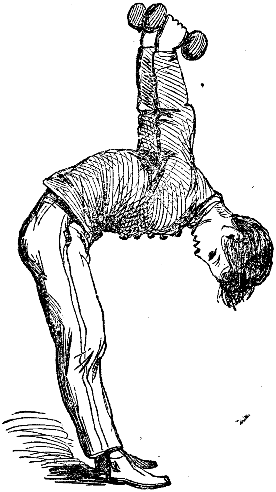


Fig 2.

Are excellent for opening the chest and developing the muscles of the arms; but care must be taken not to put too heavy a pair into the hands of a novice. In ancient times they were used by the Greeks and Romans in their gymnastic evolutions. The first exercise consists in raising the dumb-bells alternately to the height of the shoulder, the hands of the boy being brought steadily up, straight before him; all appearance of jerking or effort must be avoided. The movements of dumb-bell exercises are generally pretty much like those in arm exercise; but they are more efficacious, inasmuch as the weight of the dumb-bells develops the muscular powers of the arms and opens the chest. The motions must not, however, be continued too long without

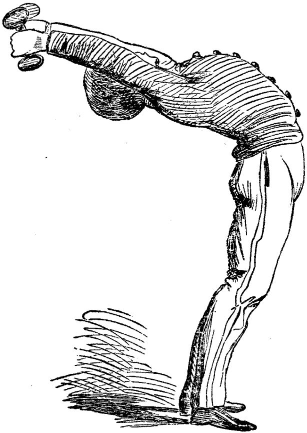


Fig. 3.

rest, as the work is rather heavy. We give the following two exercises, which, together with the motions described in the hand and arm exercises, already given, will be amply sufficient for the young gymnast.

First Exercise.—Take the position of Fig. 1, incline the body forward, throwing the arms upward behind the back, as in Fig. 2; resume position of Fig. 1. Repeat this four times. Take the position of Fig. 1, throw the chest and arms backward as in Fig. 3; resume position of Fig. 1. Repeat four times. Then perform the combined exercises four times. *These motions should not be performed rapidly.*

Second Exercise.—Take the position of Fig. 4, stand *erect*, head inclined a *little* back, with the arms extended full length in front, and the bells held horizontally, with the thumbs together. At the command *one*, bend the body a little forward, and bring the arms directly to the rear, as represented by the dotted lines in Fig. 4, turning the bells completely over, and still keeping the thumbs together in making the motion. At the command *two*, bring the bells to first position. Repeat this rapidly several times.

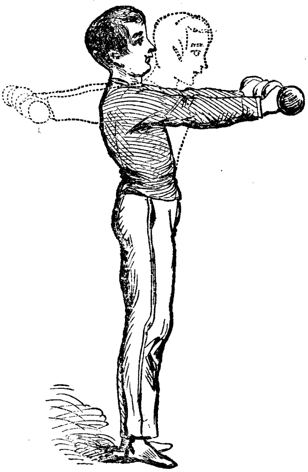
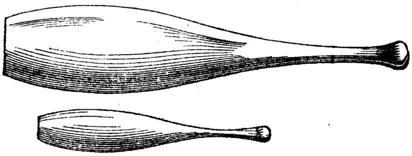


Fig. 4.

THE INDIAN CLUB.

This branch of gymnastics is one we strongly recommend to boys. In using the clubs the chest is expanded, greater freedom is given in the use of the arms, the muscles of the legs and arms as well as those of the whole body are brought into full use, the wrist is strengthened, the grasp of the hand is made firmer, the circulation of the blood is regulated, and the health in general is greatly improved. If their use is persevered in, they will render the person who practises with them *ambidextrous*—that is to say, he will be able to use his left arm almost as well as his right in hurling, flinging stones, lifting weights, and similar operations. The young gymnast must be careful, and use light clubs at the outset, remembering that if he persevere, he may soon achieve the skill and strength necessary to wield



heavy ones with ease. The clubs vary in length, ranging from eighteen to thirty inches. The shape mostly used is shown in the foregoing illustration.

The illustration represents the largest and smallest sizes; there should be at least six sizes between these two, making eight different sizes in all.

As these clubs increase in length they increase in diameter (at the bottom) also.

Two clubs must be made of each size, and each fellow in size should be as nearly as possible of the same weight as the other. They are usually made of hard wood, to withstand any accidental blow, for it will frequently happen that they will be brought in contact one against the other, especially by beginners. Again, it is for their weight that they are used; were it not for that, the using of them would not have the required effect.

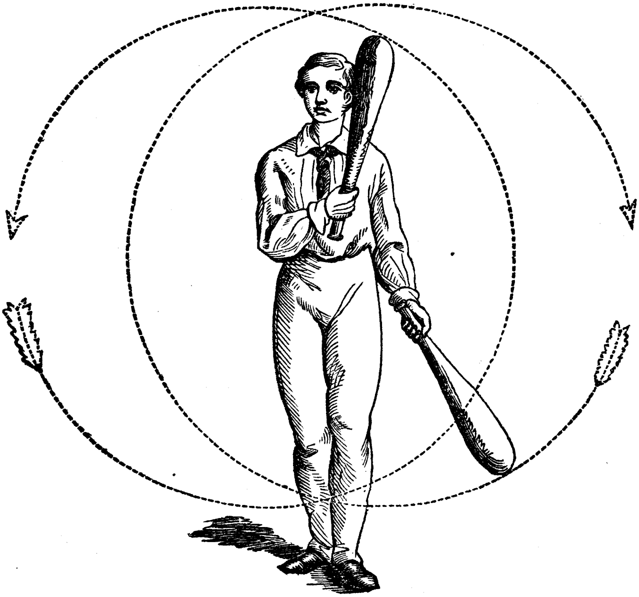


Fig. 1.

First Exercise.—Hold the smallest club in the right hand, and with the motion of the wrist only, give a circular motion to the club; as from left to right, from right to left, from front to back, from back to front, as near as possible. The arm must be kept straight down at the side. Repeat the exercise with the left hand.

Second Exercise.—Repeat the above exercise with the arm bent at the elbow, but the forearm must be kept perfectly still.

Third Exercise.—Hold a small club in either hand, and repeat the above exercise, allowing both the clubs to revolve the same way.

Fourth Exercise.—The same exercise as last, but causing the clubs to revolve in opposite directions, thus: let the left hand club go from left to right, whilst the right hand one goes from right to left, or *vice versâ.*

Fifth Exercise.—Repeat the same exercise with the arms extended in front, at the sides, or straight over the head.

Sixth Exercise.—Repeat the last exercises, allowing the arm to be bent at the elbow.

Seventh Exercise.—Repeat the last exercises with the elbow as the centre of the described circle instead of the wrist, placing the arm in the several relative positions. (See Fig. 1.)

Eighth Exercise.—Exercise the arms in any of the foregoing exercises, with a large and small club at the same time, and one arm doing the same exercise as the other, or different.

Ninth Exercise.—Lift the club to the shoulder, first with the right arm, then with the left, then both arms together. Then the clubs must be whirled slowly round the head (see Fig. 2), each arm being used alternately, and the foot of the club depressed toward the shoulder as the club passes round the head. The motions must be made slowly at first, and gradually increase in rapidity as the pupil becomes proficient.

Tenth Exercise.—The same exercise with two clubs, and both arms to revolve in the same, or in different directions.

Eleventh Exercise.—Hold a club in either or both hands, with the arm bent at the elbow. Let the club lean on the shoulder first, then as low as possible, and with the motion of the wrist only, carry the club out straight with the forearm. This should be done as if a blow were intended to be given.

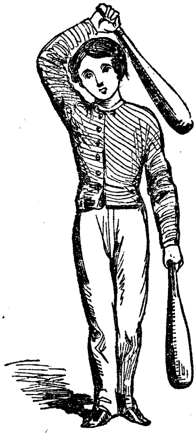


Fig. 2.

Twelfth Exercise.—Hold as large a club as possible, with the arm or arms extended in front or at the sides.

Thirteenth Exercise.—Whilst holding out a club with one hand, achieve any of the aforementioned exercises with the other.

Fourteenth Exercise.—Hold any of the clubs (the larger the better) in either or both hands, bring the hands up suddenly under the arm-pits, and drop them again as quickly as possible.

Fifteenth Exercise.—Bring the hands up under the arm-pits, and extend them suddenly in front or at the sides with the clubs upright.

Sixteenth Exercise.—Repeat the above exercises successively. The hands may be brought up under the arm-pits or to the shoulders, as most convenient, before proceeding with the next.

In performing the last three exercises, the elbows must be kept as high and as far back as possible.

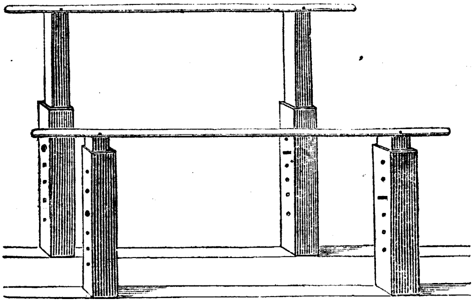
Seventeenth Exercise.—Hold a club in each hand with the arms extended at the sides, the hands to be kept as high as the shoulders, and the sides of the clubs, and if possible the hands, made to meet behind.

Eighteenth Exercise.—Achieve any of the foregoing exercises whilst standing on one leg.

Nineteenth Exercise.—Aim at any imaginary object with either of the largest size clubs, allowing the blow to be given as if to descend on a man's head, and when the club shall have reached that imaginary point,it is to be brought to a sudden standstill, as if something had impeded its progress, and there held for a short time. This exercise should be done both in front and at the sides.

Twentieth Exercise.—Repeat the above exercise with a club in each hand, the blows to be given both at the same time in front or at the sides, or with one in front and one at the side.

PARALLEL BARS—OUT-DOORS.



PARALLEL BARS.

If the apparatus be intended for the open air, four posts must be fixed in the ground, perpendicular on the inside, eighteen or twenty inches apart at the ends, and about five feet six inches apart lengthways, which will give the form of a parallelogram. These posts should be about three feet six inches* above the ground, and made of fir poles, as near the same size as possible.

The bars should be of elm, and free from knots, and should extend about a foot beyond the posts at each end, which will make them seven feet six inches long. They should not be perfectly round, but slightly flattened on both sides, and about two inches and a half in the longest diameter.

There should be a kind of shoulder in those parts of the bars which rest on the posts, which will give additional strength to the bars. The ends should be slightly rounded, to fit the hollow of the hand.

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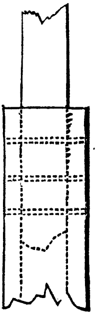
* Four feet would not be too high.

If this apparatus be erected in a building, we should recommend the posts to be made so as to allow the bars to be lifted higher, if required, and according to the height of the gymnast, or the height required to perform the feat.

Let the case for each post be made to allow a two-inch square pillar to slide up and down inside it, thus:



The case should be made of wood, from three-quarters of an inch to one inch in thickness, according to the strength of the wood used.

Holes (represented by the dotted lines) must be bored through both pillar and post, into which an iron pin is put to keep the bar at the required height.

These holes are to be made in the direction of the bars, about four inches apart, and six in number, counting from the top. All four pillars must be alike in every respect. The bars and posts should be neatly mortised together, and, for further security, a wooden peg should be used instead of an iron one.

1.—To get on the Bars.

Stand between the bars, with the hands hanging close to the sides, spring up, place a hand on either bar, and keep yourself suspended.

Another Method.—When the bars are about level with the top of the learner's hips, the hands must be placed on each bar, and the legs lifted from the ground, which will cause the whole weight of the body to be upon the arms; the head will now be thrown a little forward.

All that is requisite for the learner to do now is to straighten his arms, thereby raising his body into an upright position. (See Fig. 1.)

This requires great strength in the wrists as well as in the arms, and cannot be performed but by one who has strength in those parts.

Practise this exercise with the fingers on the inside of the bars, as well as on the outside.

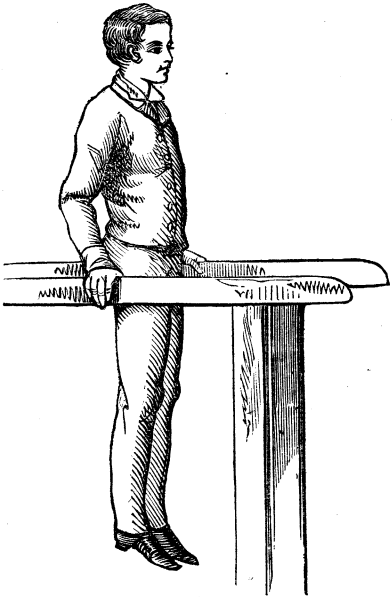


Fig. 1.

2.—Walking.

Suspend yourself, as in No. 1, at the end of the bars, and move the hands alternately along them, which must be done without bringing the shoulders out of their place, or hasty and irregular steps being made, the body or legs twisted about, or any like irregularity.

When the opposite end has been reached, the walk must be repeated backward to the point of starting.

This will be a little tedious at first, but after a little practice it will be quite easy.

This exercise must be repeated with the fingers on the inside of the bars.

The arms must be kept perfectly straight, or you are liable to fall.

3.—Hopping.

This exercise tries the strength of the wrists very much, and to perform it the learner must mount between the bars as in the last, and instead of moving the hands alternately, they are to be moved both at the same time; the legs are to be kept perfectly straight.

Short steps should at first be taken, and increased in length gradually, as soon as the learner can do it with ease.

4.—Swinging.

In order to get a perfect freedom in the arms and wrists, the swing is an exercise to be practised.

While suspended between the bars, the learner must swing the legs and body to and fro; very little at first, until he can with safety increase it. The legs must be kept close together and straight.

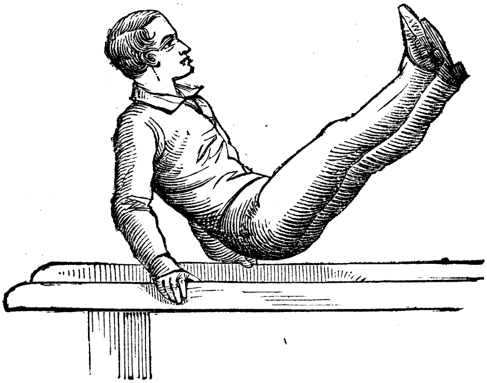


Fig. 2.

In increasing the swing, the legs must be made to do their utmost both in the forward and backward swing, and in either case the feet must be carried as high as the head, the higher the better. (See Fig. 2.)

In the backward swing the body will be parallel with the bars. (See Fig. 3.)

5.—JUMPING.

This exercise is similar to the last, but in order to do it the learner must get his body into a good swing, the jump being made between the swing.

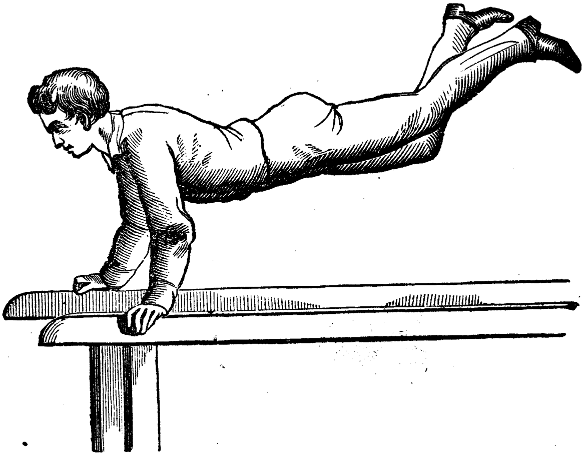


Fig. 3.

Owing to the variety of exercises to be achieved in this, we have, for the purpose of its being the better understood, divided it into parts.

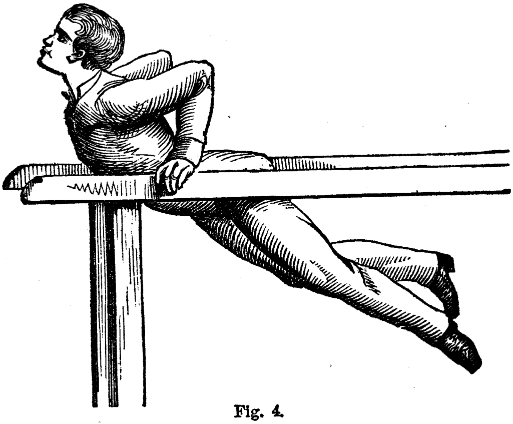


Fig. 4.

First.—During the swing, advance the arms alternately, one in the forward and the other in the backward swing.

Second.—Advance one arm alternately in the forward swing only.

Third.—Advance one arm alternately in the backward swing only.

Fourth.—Advance both arms at once in the forward swing only, as in Fig. 2.

Fifth.—Advance both arms at once in the backward swing only, as in Fig. 3.

Sixth.—Advance the arms in either the forward or backward swing.

These exercises will be found to make the arms ache, but this will soon wear off after a few times practising.

Keeping one leg (or both) up will make the exercise more difficult, yet this should be also practised.

6.—The Long Leap.

Great strength is required in this exercise. It is performed by swinging the body at one end of the bars, and, with a sudden spring, jump to the other end (or as far as you can), which must be done in the forward swing, and, in alighting on the bars again, let the arms be bent, as in Fig. 4. The position of the body in the forward spring is given in Fig. 5.

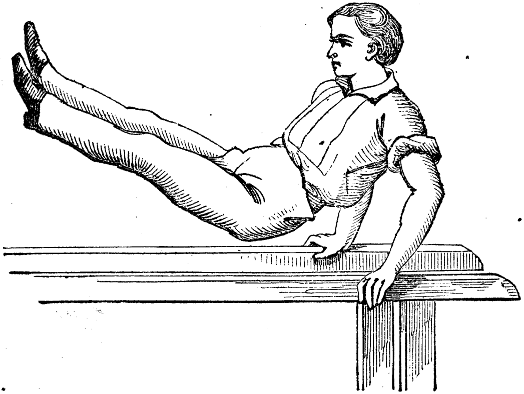


Fig. 5.

7.—The Long Run.

When the body has been swung as high as possible, and in the backward swing (see Fig. 3), make as many alternate movements of the hands along the bars as you can before you allow your legs to fall.

This must be repeated to the end of the bars.

This exercise may also be done with the body in the forward swing, but this is much more difficult; yet it is to be overcome by practice.

8.—The Kick, or Spur.

While swinging, as described in No. 4, draw up either leg alternately, and send it out again with all your force; or bring up both legs at once, but it must be done in the back swing, and when the legs are high above the bars, or you are likely to feel the effects of your own kick.

The sudden motion of the legs is likely to throw the body a little out of its balance, yet, grasping the bars firmly will prevent it, after a little practice.

9.—To Bring the Legs Over.

Swing between the bars, and, with a gradual motion, throw both legs over the right-hand bar

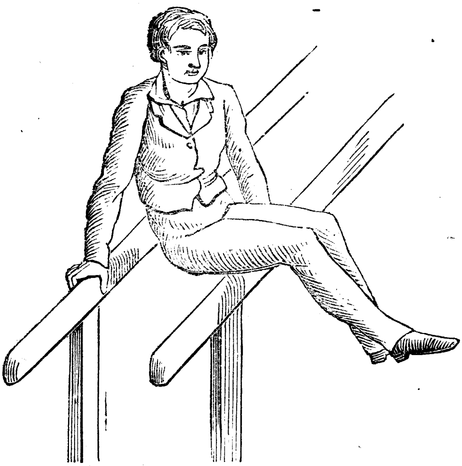


Fig 6.

With a sudden spring, bring the legs between the bars again, and throw them over the left bar. (See Fig. 6.)

The hands must grasp the bars firmly in this and the next exercise.

10.—To Rise and Fall Below the Bars, or the Letter L.

Sit on the ground, grasp the bars with the hands on the outside, and pull yourself up gradually until the shoulders are level with the bars; then as gradually lower yourself, still keeping yourself in the same position, namely, the feet elevated and the legs straight, as in Fig. 7. It should be repeated two or three times.

Difficult at first, but soon achieved by practice.

This exercise may be done in No. 1, when the legs are to be gradually raised until level with the bars. The knees are to be kept perfectly straight.

11.—To Rise and Sink Down above the Bars.

Mount between the bars as in No. 1, grasp them firmly, and lower the body gradually by bending the arms until you assume the position shown in

Fig. 8, but without allowing your feet to touch the ground, then gradually raise yourself by trying to straighten your arms; this will put the whole strength of your muscles to their utmost.

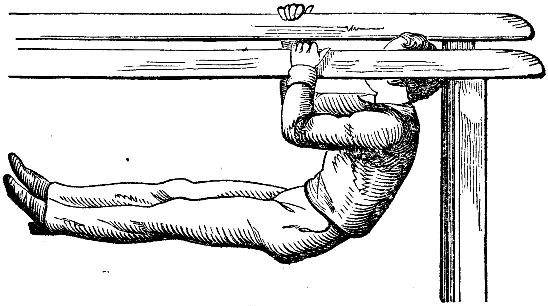


Fig. 7.

Do not allow your body or legs to move or turn about, but take it easily, and after a few times trying you will become perfect master of it.

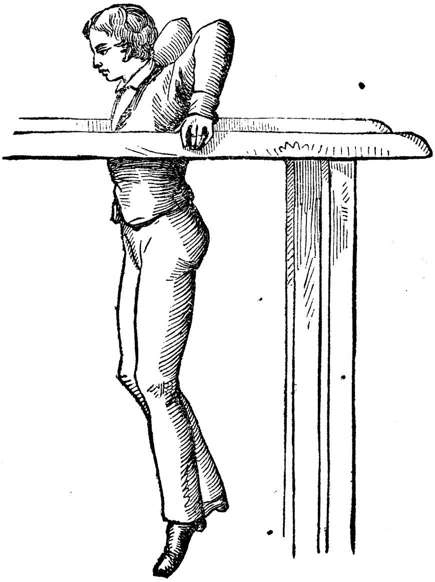


Fig. 8.

12.—The Janus.

Mount between the bars in the middle, and throw a leg over each in front of your hands.

Grasp the bars firmly, and, with a spring, bring the legs between the bars, and carry them behind you, but in so doing cross the legs, as in Fig. 9, and in giving the body a slight twist, allow them to rest on the bars, when the right leg will be on the left-hand bar, and the left leg on the right-hand bar. (See Fig. 10.) Do not always turn your body the same way, or let the same leg be always uppermost in crossing them.

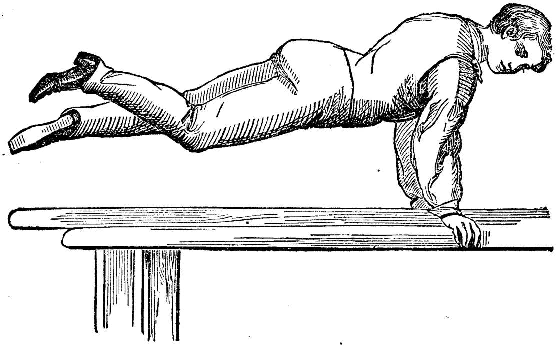


Fig. 9.

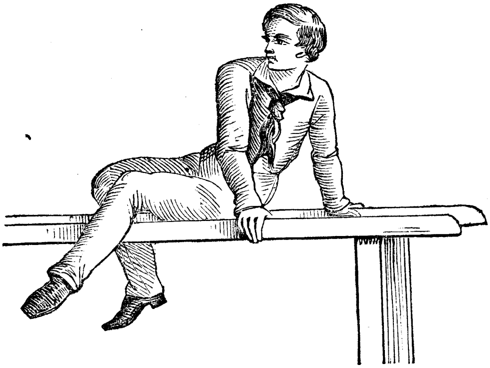


Fig. 10.

This exercise should be repeated five or six times successively.

13.—The Barber's Curl.

Stand between the bars, and sink down until the head be below the bars. Grasp the bars with the hands and straighten the knees into a sitting posture, thereby forming the letter L (Fig. 7).

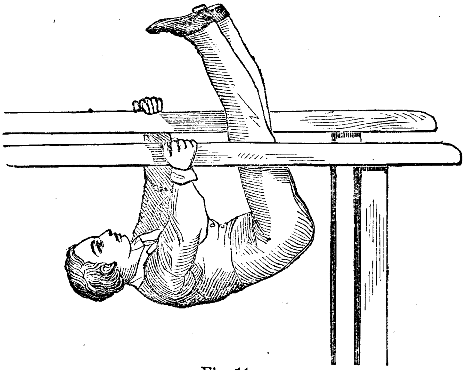


Fig 11.

Now bring the legs gradually over between the arms (Fig. 11), till they perform a circle, or until they come nearly down to the ground (Fig. 12),

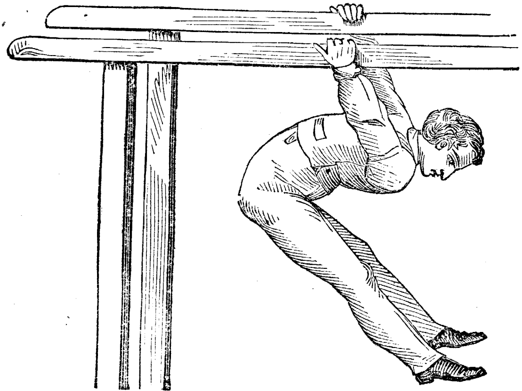


Fig. 12.

and after staying in that position for a short time, bring them back again quite as slowly as you brought them over.

The knees must be kept straight during the performance of this exercise, likewise the feet kept off the ground.

Difficult to beginners, and makes the arms ache, but it is nevertheless easily performed after a little practice.

Do not give it up in despair if unable to do it the first, or even the second time trying, for this is a very pleasing exercise, and tends greatly to strengthen the muscles of the arms, and likewise causes the grasp to be much firmer.

14.—The Turnover.

Sit astride the bars as across a saddle, stretch your hands in front, fall forward, drop between the bars with a quick motion, and grasp the bars behind you, which will cause you to release your hold with your legs (see Fig. 13), and by bringing them together directly they are free of the bars, they will drop between them, when you may alight on the ground.

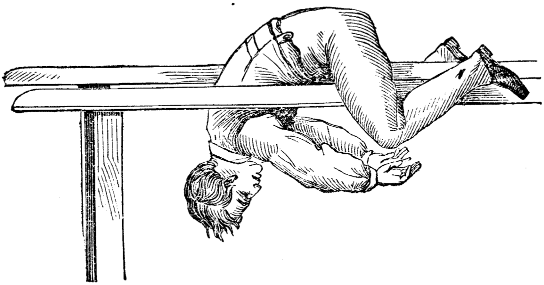


Fig. 13.

Try it slowly at first, so as to understand the mode of catching hold of the bars, and do not attempt to let go the bars with your legs until your hands have a firm hold, or when sure of not making a false aim at them.

Gradually increase the quickness of the motion until you can achieve it without any pause, for it is necessary to do it quickly in order to do it properly.

15.—The Forward Somersault.

This feat is generally performed at the end of No. 2, or any other exercise which brings you to the end of the bars. It gives a very brilliant finish to any of those exercises, and is not so difficult as may at first appear.

When you reach the ends of the bars with your hands firmly grasping the ends, as shown in Fig. 14, lean a little forward and bring the body into an upright position, with the legs bent over the head, and in so doing bend the arms, which will cause the shoulders to come between the bars, bring the legs over, and when you find yourself nearly overbalanced, give a slight spring

In flying over the ends of the bars, let the body lean well forward, assisted with a slight spring of the hands, which will give you greater courage to let go, likewise a better and easier method of bringing your legs together again without knocking them.

The greater the impetus used in swinging, the greater will be the success of achieving the feat.

17.—To Stand on the Bars.

Place your hands on either bar, spring with your toes, and throw the right leg over. Bring the other leg up and hitch the toe under the bar (see Fig. 16), lean the body forward, with the arms extended in front to balance yourself, then bring the other (right) foot on the bar, as close as possible to the body, and by means of the toe under the bar, with which you are to steady yourself, raise your body up so as to stand on the right leg. Do not unhitch the toe until you are firmly standing on the bent leg.

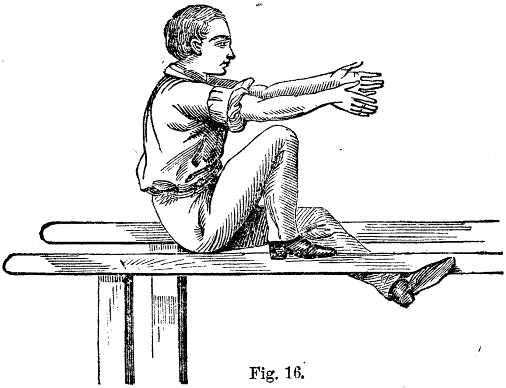
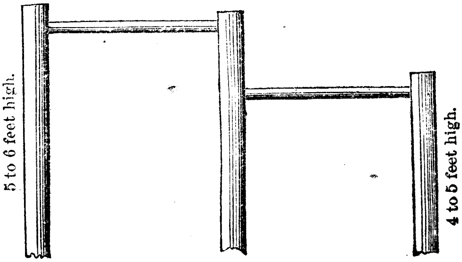


Fig. 16.

Now gradually lower yourself again, taking care how you slide the toe along under the bar, and likewise to maintain a good balance.

THE HORIZONTAL BAR.

For Out-doors.—Three posts, one lower than the other two, are to be fixed in the ground about six feet apart, and a bar to be fixed in either two of them, as in the annexed cut.



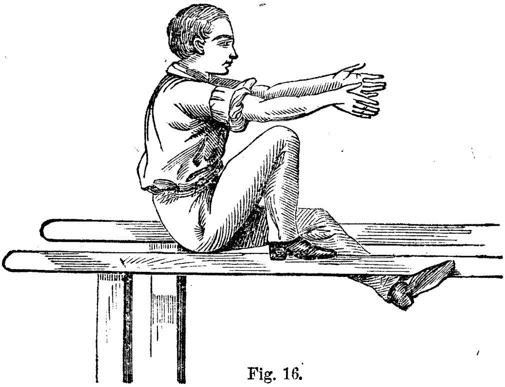
The bars, if made of wood, to be about a quarter of an inch more

In flying over the ends of the bars, let the body lean well forward, assisted with a slight spring of the hands, which will give you greater courage to let go, likewise a better and easier method of bringing your legs together again without knocking them.

The greater the impetus used in swinging, the greater will be the success of achieving the feat.

17.—To Stand on the Bars.

Place your hands on either bar, spring with your toes, and throw the right leg over. Bring the other leg up and hitch the toe under the bar (see Fig. 16), lean the body forward, with the arms extended in front to balance yourself, then bring the other (right) foot on the bar, as close as possible to the body, and by means of the toe under the bar, with which you are to steady yourself, raise your body up so as to stand on the right leg. Do not unhitch the toe until you are firmly standing on the bent leg.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Now gradually lower yourself again, taking care how you slide the toe along under the bar, and likewise to maintain a good balance.

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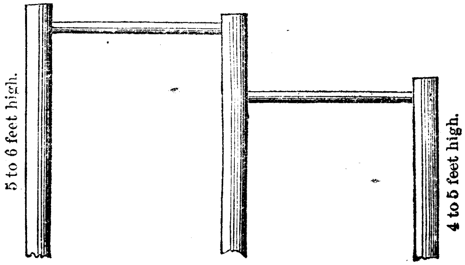
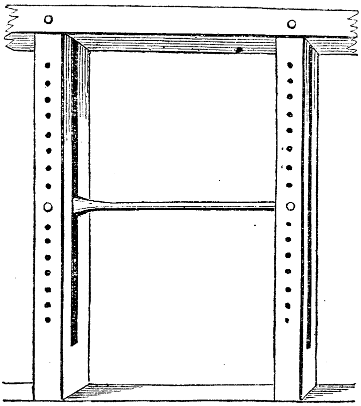


in diameter than the parallel bars, as greater strength is required in some of the exercises, during the performance of which the bar is very much bent.

If these bars be made of iron, they should be much smaller, and should not be used if rusty, but first rubbed with a piece of coarse sand-paper, otherwise the clothes will suffer. We prefer the wooden bar for several reasons, and therefore recommend it.



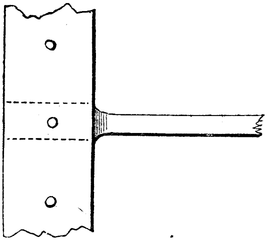
HORIZONTAL BAR.

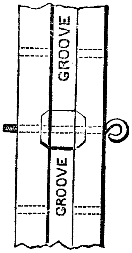
For In-doors.—Two posts, about eight inches square, are to be so fixed as to withstand any amount of work on the bar without being loosened in the ground.

Previous to their being fixed, a groove about six feet long should be cut through each post to about eighteen inches from the ground.

About twelve or fourteen holes should be bored through the post within the length of the groove for an iron pin to pass through, to keep the bar at the required height.

The bar may be of the same length and size as required for the out-door, but it should have a small shoulder at each end, in order to rest firmly against each post, thus:





The bar may then be lifted to any height required.

18.—To Hang on the Bar.

Jump up and lay hold of the bar with both hands, let the thumbs be on the same side of the bar as the fingers, and likewise the knuckles as far upward as possible.

Grasp the bar firmly without any fear of not being able to retain your hold for a long time, and alternately take away the right and left hands. Suspend yourself as long as convenient, but do not overtire yourself, and in dropping from the bar be careful to alight on the toes.

19.—Walking.

Grasp the bar as in the last, and move the hands alternately along the bar, beginning with short and even steps, increase their length until able to take them with ease, and when capable of so doing, place one hand on either side of the bar, and proceed as above, but the hands must now advance one before the other, and in returning walk backwards.

Keep the legs straight and the toes pointing to the ground, and do not move them about in performing this exercise.

20.—Jumping.

This exercise is performed in the same manner as the last but the hands must move both at the same time instead of alternately.

The legs may be bent a little, to assist the learner in making the spring.

21.—Swinging.

Hang by the hands about the middle of the bar, move the legs and body to and fro as if on a common swing, and after a little practice you will find your body rise level with the bar. (See Fig. 17.)

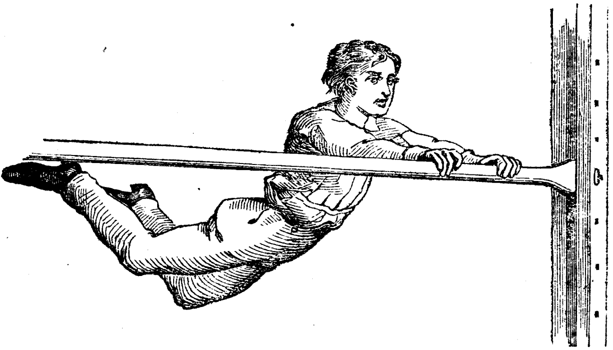


Fig. 17.

Do not be afraid of swinging too high, as many feats, to be hereafter mentioned, depend greatly on the neatness of the swing.

Swing to and fro at least a dozen times, not more, and in leaving the bar do so in the forward swing, and when your feet are rising to a level with your face, when you must let go your hold, and with a motion of the body alight on the toes.

This is a very neat way to leave the bar, and the farther the gymnast can alight on his feet from the bar, the greater will be his after success, and the more graceful will his performance appear.

Above all, avoid jerking the legs in swinging.

22.—To Rise and Fall.

This exercise is very similar to No. 10, but this sometimes receives the name of breasting the bar; it is, nevertheless, nothing more than the pulling up of the body as high as the arms will allow.

Hang on the bar, and gradually pull yourself up until your breast is as high as the bar, then steadily lower yourself again. (See Fig. 18.)

Repeat this five or six times at least, and if not able to succeed in doing it the first time of trying, do not despair, for on this exercise likewise depends the being able to accomplish many others, as it tends greatly to strengthen the muscles of the arms and the wrists.

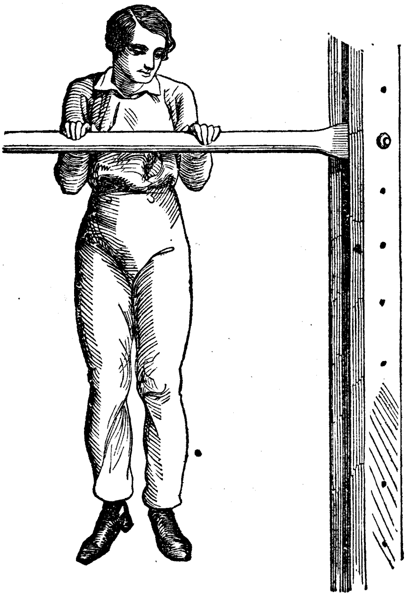


Fig. 18.

23.—The Letter L.

This exercise only differs from the last in one respect, that instead of the legs being allowed to hang straight, they are brought to a right angle with the body, thereby forming the letter L, and in this position raise the body as in the last exercise. (See Fig. 7.)

This will seem more difficult to the learner than No. 10, partly owing to the difference in the position of the body; but practice will soon overcome that difficulty.

24.—The Pancake.

Proceed as described in No. 21, and when the body has swung nearly as high as the bar, let go your hands, and after bringing them smartly together (see Fig. 19), renew your hold on the bar, and continue to swing. Persevere in doing it until able to do it with ease and perfection; the former only to be obtained by constant practice, while the latter consists in the smartness with which the hands are brought together.

The farther the gymnast springs from the bar, the greater the effect.

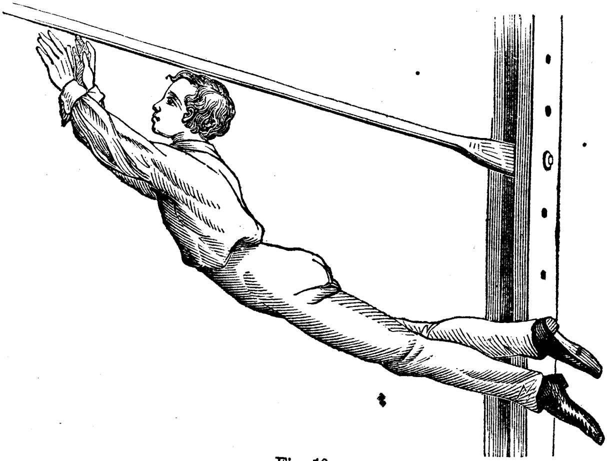


Fig. 19.

This exercise should be repeated three times before allowing the feet to touch the ground. It is a difficult exercise to beginners, but very soon overcome.

The bar should be about two feet above the head of the gymnast, when standing on the ground.

25.—To Turn a Pancake.

Proceed as described in No. 21, and every time the body is in the forward swing (when the back will be toward the ground), give a smart turn, letting go the bar and grasping it again quickly, before the body has time to descend.

After a little practice, the body should be turned every time, thereby preventing it from descending in the backward swing, consequently the gymnast has the opportunity of seeing which way he goes.

The gymnast will find that he will improve in this exercise every time he practises it.

26.—To Bring the Body Through.

Hang on the bar as before described, and with a gradual motion bring the legs up toward the bar, bend the knees, pass them between the arms under the bar, and allow the legs to pass through, together with the body, which must fall as low as the arms will allow; when the body, arms, and legs ought to be nearly in a line with each other. (See Fig. 20.)

After remaining in that position for a short time, return through the arms again, without allowing the hands to loose their hold, or the feet to touch the ground.

It will be found very difficult for beginners to return; until able to do so, release the hands and fall to the ground; but after a little practice, especially with a little assistance at first, it will become very much easier than it would at first appear.

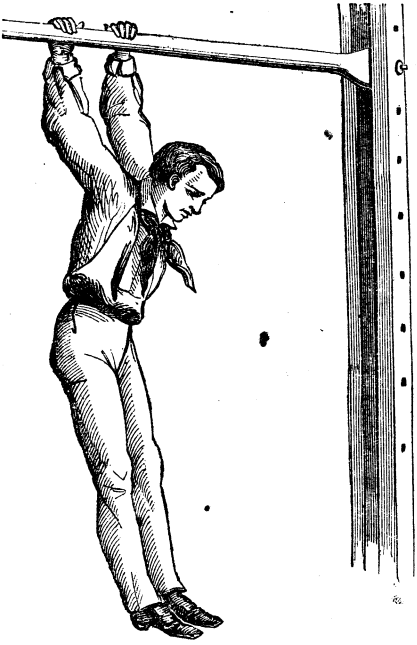


Fig. 20.

27.—The Everlasting Twist.

This is an excellent exercise, and one we strongly recommend, as in performing it the gymnast must, if he have not yet done so, suspend himself by one hand, thereby testing the strength of each wrist.

Proceed as last described, but in lieu of bringing the body again through the arms, let go one hand, when the body will swerve completely round, grasp the bar again, and repeat the exercise as often as convenient. If it be done six times without stopping, and always letting go the same hand, it will appear as if the arm was being twisted completely round.

We have always found the above give the greatest satisfaction, and we should therefore recommend its constant practice and attention.

Do not always use the same hand.

28.—To Hang by the Legs.

Bring the legs through as described in No. 26, and throw the legs over the bar instead of allowing them to fall toward the ground. Rest them as shown in Fig. 21, bending them over the bar as far and as firm as possible, let go the hands and allow them to hang loosely.

After remaining in that position as long as convenient, bring the arms up, and by drawing the body up a little, grasp the bar again and allow your body, after having unhitched your legs, to fall as in No. 26, and drop to the ground, taking care to alight on the toes.

Another method will be described in a future exercise, as it will be necessary to achieve one or two exercises to bring the body above the bar in order to sit on it.

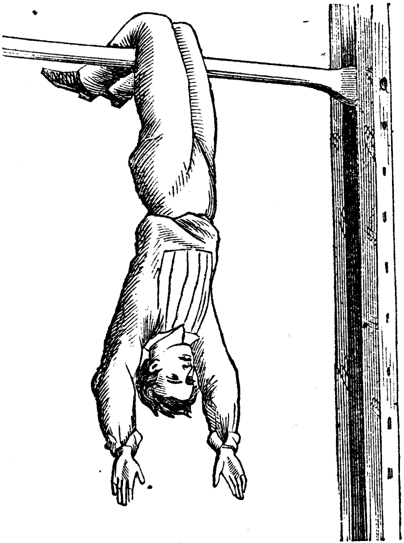


Fig. 21.

29.—Circling the Bar.

This, to a beginner, is a difficult and annoying exercise. Difficult because he is very likely to be a long time before he be able to do it to perfection; annoying because his shins are sure to suffer if he does not go over the bar as he intended. Yet when once accomplished, no exercise will be found more easy.

Hang on the bar and proceed with No. 26, but carry the legs above the bar, instead of under, and by pulling the body up with the arms, and a slight motion of the wrist, carry the legs completely over the bar, and in going over they will act as a sort of balance to your body, and with the assistance of your arms, the body will be brought into the required position.

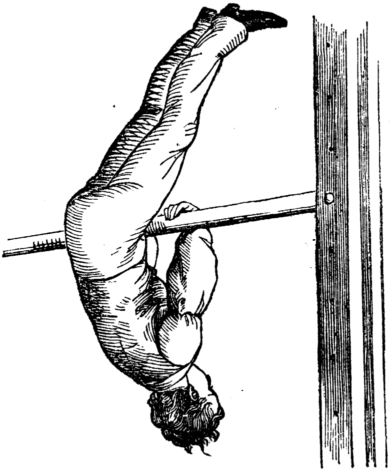


Fig. 22.

As a means of enabling a young gymnast to circle the bar sooner than by the method just described, only let him fix the bar about as high as his chin, when, after having placed his hands on the bar, and with a step forward, he might give his legs that impetus upward, which will carry him over the bar quickly as possible, but in so doing the legs must be straightened (see Fig. 22), and carried over the bar by the simultaneous motion of the arms, especially the wrists. This will, in a very short time, enable him to do it as first described, when the bar should be raised high enough to cause the gymnast to jump in order to reach it.

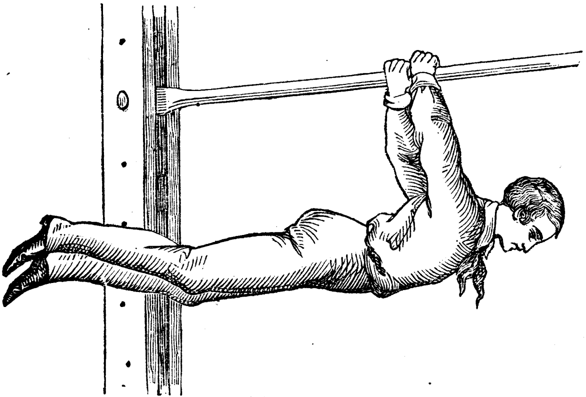


Fig. 23.

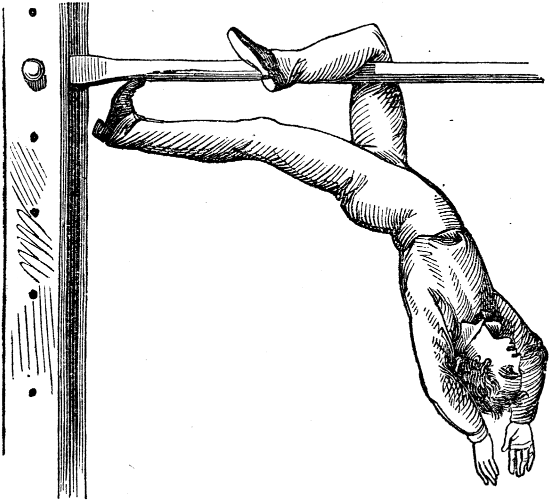


Fig. 24.

30.—The Lever.

This exercise requires great strength in the muscles of the arms, and is only to be achieved by practice, and with a determination to succeed.

Go through the arms as in No. 26, keep the legs perfectly straight with the body, and gradually lower them until level with the ground as in Fig. 23. After remaining in that position a short time, either drop to the ground, or carry the body back again through the arms; the latter should be preferred.

31.—The Suspender.

This exercise is meant to test the strength of the grasping of the bar with one leg.

Stand under the bar and grasp it with both hands, one on either side, and with a sudden spring throw the right leg over the bar toward the left; then place the toes of the left foot under the bar, as in Fig. 24; let go the hands, and allow your body to lower itself as much as possible, remaining in that position as long as convenient.

The hands may either hang loosely, as in Fig. 24, or be folded across the chest.

Repeat the exercise by reversing the position of the legs.

The leg under the bar must be kept perfectly straight.

THE SUSPENDED BAR, OR TRAPEZE.

This is preferable to what is generally termed the "triangle," for two reasons: first, the ropes need not be but one-half the length; second, the gymnast can perform a greater number of the horizontal bar feats with the suspended bar than with the triangle. It is constructed thus,—two ropes are suspended from the ceiling or roof of the building, by means of crooks, each rope to have a loop at each end, cased with iron, to prevent its wearing away.

A bar of tough wood, about twenty-eight inches long, is hung on to the ropes by means of crooks fixed to the ends of the bar, thus:

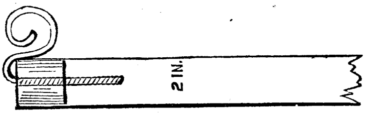


Fig. A.

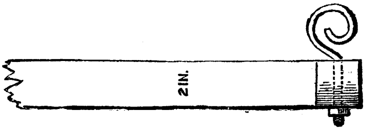


Fig. B.

The crook in Fig. A is screwed *into* the end, and the wood is kept from splitting by an iron ring or cap, represented by the shaded part.

The crook in Fig. B is screwed *through* the cap and bar, and kept in its place by an iron nut.

An extra iron ring should be fixed in the lower end of each rope, to enable the bar to be hitched on the more readily, the ring to be about the size of the crook.

The ropes should not be less than five-eighths of an inch in diameter, and six feet six inches long.

32.—The Turn.

Place the left hand on the bar, with the fingers backward, and the thumb in front of the bar, close to the left-hand rope, which must be grasped with the right hand about the height of the shoulder, then carry your body round the left-hand rope, and by lifting your legs over the bar resume your position on it.

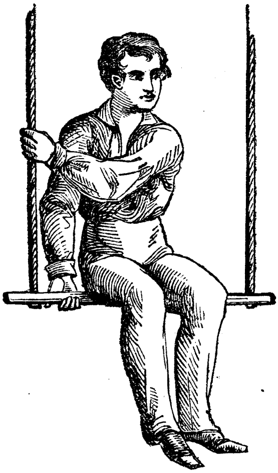


Fig. 25.

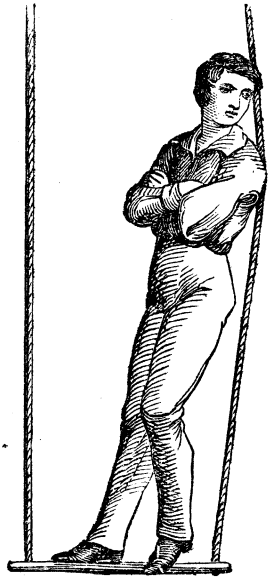


Fig. 26.

Do the same with the right-hand rope, only let the left hand be uppermost. (See Fig. 25.)

The rope must be grasped as shown above.

33.—To Stand on the Bar.

First sit on the bar, grasp the ropes as high as possible, and with a gradual motion, similar to No. 10, pull yourself up until you can place your feet on the bar; then place the hands a little higher, to ease yourself, or proceed with the next exercise.

34.—To Stand at Ease.

Turn your back against one of the ropes, with your feet on the bar, but the toes turned out (see Fig. 26), and when perfectly steady, fold the arms across the chest.

Do this against either rope, and do not always keep the same foot in front.

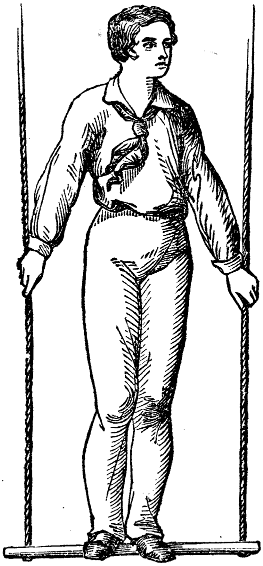


Fig. 27.

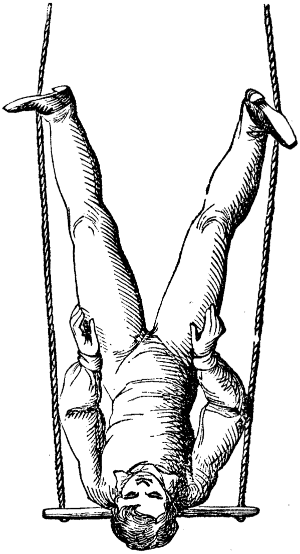


Fig. 28.

The feet may be placed as in Fig. 26, or the front foot may be slided forward, so as to rest the hollow of it against the bottom of the rope, and the other laid across it, as when sitting in a chair a person stretches out his legs for ease and comfort.

35.—The Overthrow.

Stand on the bar and grasp the ropes firmly, as shown in Fig. 27, which shows that the knuckles are in front, and the thumbs downward, the elbows may be a little up, but the hands should be as high as the hips; then, by leaning forward and lifting your feet off the bar, allow yourself to turn quite over, when you may either alight on the bar in the sitting posture, or place your feet on the bar again; the latter you will be able to do if your hands be high enough before you turn over.

This exercise may be reversed, and the best description or idea how it should be done will be to advise the learner to notice the position of his arms and hands after he has accomplished the above exercise, and reverse the motion of the body on turning over.

36.—To Stand on the Head.

Grasp the ropes about a foot above the bar, after having first knelt on it; then, with a motion similar to the last, throw your legs upward, open them and place them against the ropes to steady yourself, then lower the body, and place the head on the bar.

After a little practice the young gymnast will be able to let go his hold of the ropes and fold his arms across his chest, or in any other position; but he must be very careful how he does it the first time.

The hands should be placed as shown in Fig. 27.

37.—The Rest.

This exercise is very similar to the above.

Sit on the bar, grasp the ropes, slide down until the bar touches the back of the neck, and in so doing, throw the legs up and rest the feet against the ropes. (See Fig. 28.)

The body must be bent a little at the hips.

The hands may be folded across the chest, or placed as shown in Fig. 28.

Care must be taken in this as well as the last, for a slip might cause you to repent of not having paid sufficient attention to the advice given.

38.—The Swing.

In swinging with the suspended bar, the ropes are sure to sway to and fro, and in thus swinging, the force required must be given at the right time, otherwise the ropes might check you.

It would give additional beauty to this exercise if the young gymnast were to perform any other exercise during the swaying of the bar, as Nos. 22, 26, or 29, or any other that he might select.

The leg-swing must be made while hanging by the legs, as in No. 28, when the arms must be well used to accomplish the exercise, to give satisfaction.

Do not omit to keep your feet well toward the ground in the leg-swing, after having once set yourself in motion.

39.—The Catch.

Sit on the bar without holding, and, in throwing yourself back, open the legs wide, and turn the toes outward, when they will hitch around the rope, as shown in Fig. 29. After remaining in that position for a short time, pull the body up and grasp the bar, when you can easily unhitch the feet.

40.—The Leap.

After achieving No. 38, and when you think yourself high enough from the ground, let go the bar and alight on it, either in the forward or backward swing, but let the toes bear the weight of the body on alighting, and not the heels.

This should be practised with a slight swing at first, as the position of the body is not the same on alighting with the forward as with the backward swing. After a little practice, the gymnast may try how far he can leap from the bar. The higher the swing, the farther will be the leap.

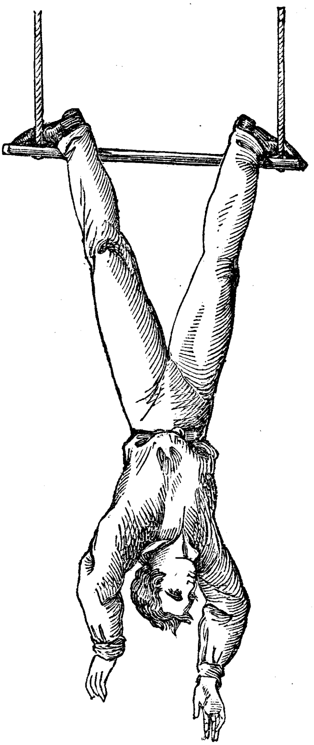


Fig. 29.

THE SUSPENDED ROPES.

This rope is supposed to be about six feet six inches long. The top loop-hole is protected by an iron ring, similar to those with the bar just mentioned. The middle loop is formed by tying the rope as represented, the bottom of the loop to be about three feet from the lower loop, which ought to be bound with some kind of metal,* both to protect the hands from rubbing against the ropes, and to keep the loop always in the same shape; otherwise, when the hands are in them, and the whole weight of the body off the ground, they will be very much squeezed, owing to the ropes not retaining their proper position.

The top and bottom loops should be spliced to the required size. The lower loop to be about eight inches long, and about five inches in diameter near the bottom, which will give, very nearly, the shape of the battledore.

The ropes are to be the same size required for the bar.

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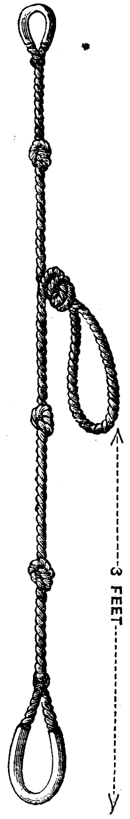
* Brass is mostly used, and is not liable to rust.



A few knots may be tied in these ropes to facilitate the climbing of them; but this should be done after the rope has been well stretched, or at least sufficient room should be left between any knots previously tied for an additional one, in case the rope should be at any time too low.

Many parties prefer these ropes joined at the top, and in many gymnasiums this is found very useful; the rings on the top are firmly bound in with tar-core, after which each single rope is bound round a few times to prevent the rings from slipping out of their places.

The knots and loops in both ropes must correspond, and the middle loops must, if possible, hang outward when the ropes are suspended, and not hang between them, or the feet are liable to be caught in them whilst performing an exercise requiring the feet in the air.

41.—Simplicity.

Grasp the bow ends of the ropes, one in each hand, throw the legs up as quickly as possible, something similar to No. 13, only much quicker, and on the feet falling to the ground, let go the ropes and alight on the ground.

Difficult as it may appear to beginners, there is not one more simple when accomplished.

The quicker this exercise is done, the more likely is the gymnast to succeed, and after trying it a few times he will be able to alight on his feet in safety.

42.—The Barber's Curl.

This exercise is described in No. 13; but instead of grasping the bar, the loops must be grasped (see Fig. 30), and in doing it the ropes must be perfectly steady, and not allowed to sway to and fro.

43.—The Everlasting Curl.

This exercise differs from the other two just mentioned, insomuch that the feet *must* not touch the ground, and ere that can be allowed the gymnast will have to undergo a very severe punishment, which we shall not here attempt to describe, but will leave him to proceed as in the last, and on the feet coming down, spread the arms a little, when he will find that his arms will seem to come out of their sockets; but heed it not, for this exercise when done three or four times without stopping, will give extra freeness in the use of the arms, and likewise give greater satisfaction to any one who may see it done.

In doing this exercise, say three or four times without stopping, the feet are not to touch the ground under any pretence whatever, and when able to do it without feeling the least unpleasant sensation, we will leave the young gymnast to judge of the injuries or benefits obtained by the practising of it.

44.—Another Method.

Proceed as last described, but allow the feet to touch the ground, and spring very slightly every time you carry up the legs.

This should be repeated both backward and forward as often as possible; it will make you very giddy, but will soon wear off after reversing the motion of the body.

The ropes must not be let go until the exercise be finished, but allowed to twist up as many times as the gymnast goes round.

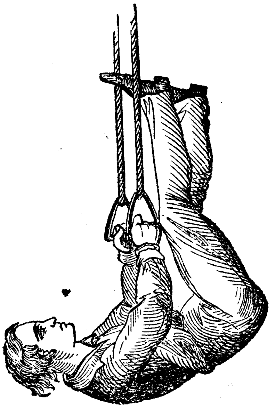


Fig. 30.

45.—The Lift.

Grasp the ropes and throw the legs up as before, but in so doing, straighten them and keep them upright. Keep your body down, and do not let it be bent, nor the feet touch the ropes. (See Fig. 31.)

When in this position, pull yourself up as far as possible, and let your body fall suddenly, still keeping the legs and body in the same position.

This is a good exercise, and tends to make the gymnast keep a firm hold of the ropes.

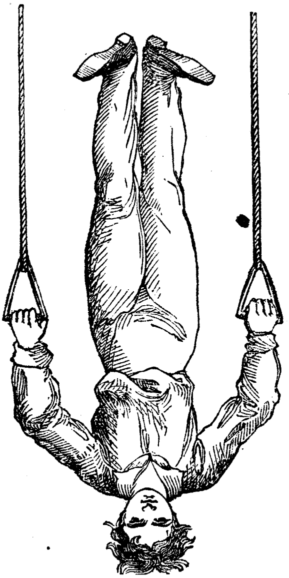


Fig. 31.

46.—The Lever.

This exercise is described in No. 30, the only difference being in the position of the hands.

47.—The Twist.

This is a very difficult exercise both to achieve and to describe.

Hang by the hands and throw the legs over; but before allowing them to fall too far, give the body a twist so as to bring the back (the nearer the middle of the back the better) against the arm toward which you turn, and in so doing, let go the other rope, and keep yourself suspended as long as agreeable. (See Fig. 32.)

The legs and disengaged arm must be kept extended as far as possible, and the body must incline a little backward, for it to rest on the arm more securely.

Great practice is required before a beginner might be able to accomplish the difficult part of this exercise, as it not only tries the strength of the muscles of the arm, but the twist given at the shoulder, and the difficulty found in balancing the body evenly, causes many to abandon the exercise as *impossible.* But when a young gymnast has once achieved it, he will feel a pride in doing it before those who before deemed it *impossible.*

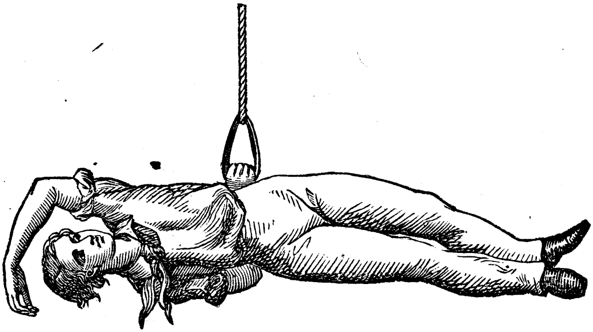


Fig. 32.

48.—The Letter L.

This exercise is described in No. 10, the hands here grasping the loops instead of the bars.

49.—The Stretch.

After rising as high as possible, as in the last exercise, bring one hand to the front and stretch the other out (see Fig. 33): the loop in the front must be grasped firmly, whilst the other is kept in the required position by the open hand, as seen below, the fingers being extended, and the whole strain falling on the hollow of the hand.

This should be done with both hands. The legs should be kept perfectly straight, or they may be made use of as if ascending a flight of stairs, the slower the better.

50.—The Change.

Proceed as last described, and after bringing one hand in front, let go the other, and keep yourself suspended for a short time; then grasp the other loop and do the same with that one, changing as often as convenient.

This is a very clever and amusing exercise, and one which should be persevered in.

51.—To Mount between the Ropes.

This is another very trying exercise, but, like No. 46, the shoulders will reap the full benefit.

Rise between the ropes as in No. 49, and with a sudden turn of the arms (one at a time at first) bring the elbows uppermost (see Fig. 34), when you may gradually straighten them by raising the body.

This exercise should be persevered in until achieved, as it will enable the gymnast to be the better able to do the next.

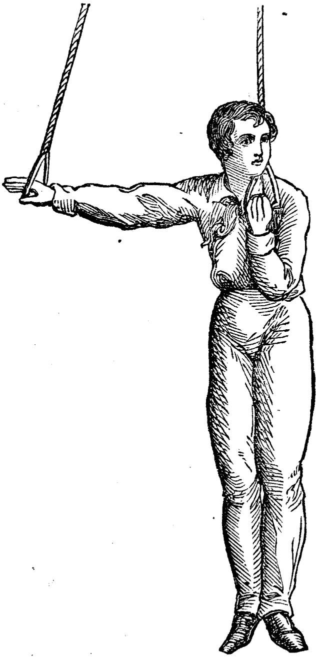


Fig. 33.

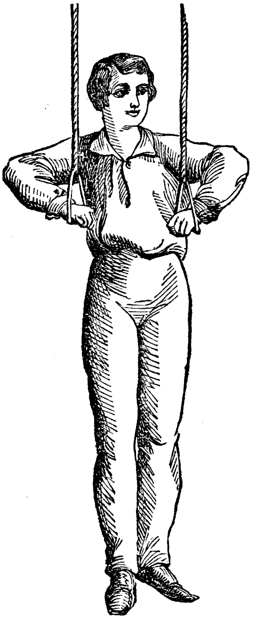


Fig. 34.

52.—The Turn-Over.

Whilst mounted between the ropes as in the last, but previous to straightening them, this exercise must be done.

Lean forward, throw the legs (backward) over the head, allowing them to fall to the ground, still retaining your hold of the ropes.

After a little practice, let go the ropes on alighting on the ground, but be careful how you do it at first.

This is a difficult exercise, but perseverance will soon overcome the difficulty.

53.—To Climb the Rope.

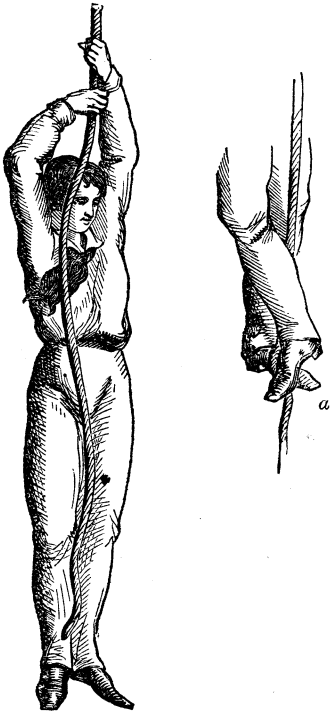


Fig. 35.

We have introduced this exercise here, as it will be required sometimes to reach the cross-piece at the top, in lieu of doing either of the other exercises.

There are two ways of climbing the rope.

First.—Grasp the rope with both hands, and move them alternately one above the other, and in order to support yourself whilst so doing, the feet must be used by pressing the rope between them, as shown at *a*, Fig. 35, where the feet are crossed and the rope is pressed by the top foot against the under one.

Second.—Grasp the rope with both hands, and without the aid of your feet move your hands alternately one above the other, but in so doing the gymnast will have to make use of the rise and fall exercise with one hand only, whilst he raises the other.

These climbing exercises should be practised on a rope free from knots, and not too small.

On descending the rope, do so by reversing the motion of the feet and hands, or the hands only. Do not let the rope slip through your hands, as the friction caused by so doing will be sure to rub the skin off, and perhaps cut the flesh to the bone.

54.—The Spring.

This exercise is somewhat similar to that described in No. 41, but it will be found a little more difficult at first to perform.

Grasp the ropes as in No. 41, and in bringing the legs over open them so as to pass one on either side of the ropes, which must be brought closer together (see Fig. 36), then, when nearly over, let go the ropes and alight on the ground.

Do this exercise also with one rope only, when both hands must be in the same rope.

This is a very clever feat, but it must be done quickly to succeed.

55.—The Jerk.

Grasp the ropes, one in either hand, and throw the right leg over the right arm (as in Fig. 37), or the left leg over the left arm, letting the other leg hang loosely in front. Now with a sudden jerk, and at the same time extend the disengaged arm a little, throw the body forward with as great an impetus as possible, when you will turn completely over, and in so doing you must not let go your hold, neither must the leg slip off the arm.

This is a very difficult exercise, and requires great nerve and practice for it.

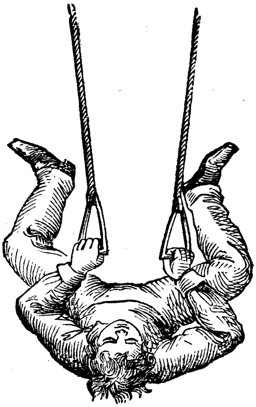


Fig. 36.

56.—The Descent.

This exercise must be done on a single rope, and the higher it is fixed from the ground the better. It should be at least from fifteen to twenty feet long, and a 56 lb. weight should be attached to the lower end of it, which should be about a foot from the ground.

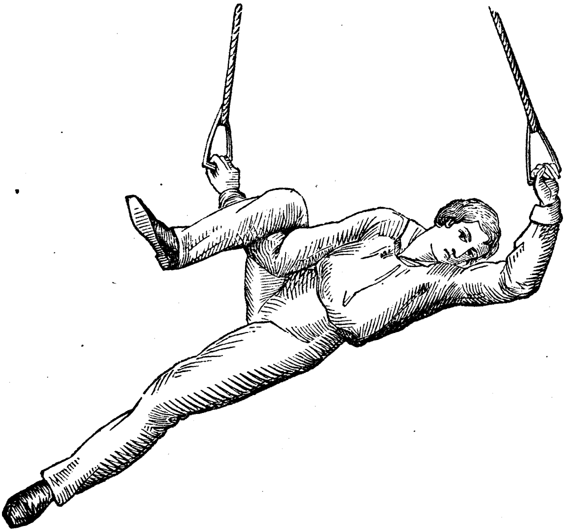


Fig. 37.

Climb the rope as far as you can, and let it hang in front of you, and come down between the legs. Bring the right leg round the rope, and hitch the foot around it again; and having so done, bring the right arm in front of the rope (as in Fig. 38), when you may descend very gradually, according to the strain put against the rope by the leg around it.

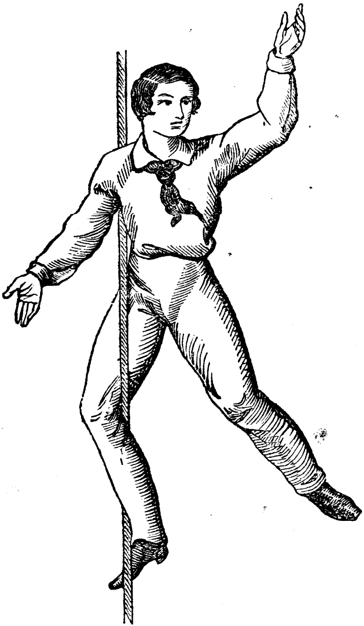


Fig. 38.

The other leg must hang loosely.

To give this feat a greater effect, the weight should be twirled round; this will cause you also to turn round as you descend.

The hands, whilst descending, should be placed in as graceful an attitude as possible.

57.—The Revolver.

Grasp the ropes, one in each hand, throw the legs up and hitch one (right) foot in one of the loops, (the right), and in so doing, let go your hold of the loop in which you hitch your foot, and grasp the other rope with that hand (the right), carrying the other (left) leg over, and allow it to hang down.

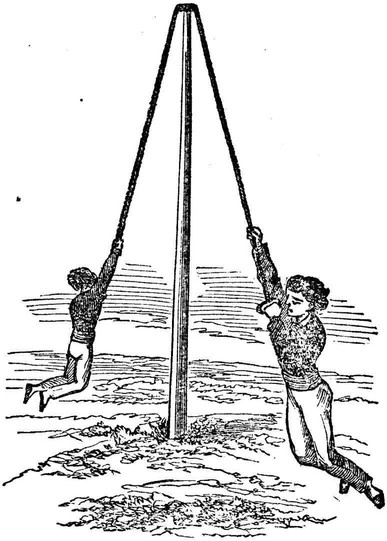
Take care on carrying the leg over as just described, that the (right) foot does not slip out of the loop.

Now with both hands grasping the one rope, and one foot in the other, pull yourself up by moving the hands alternately, and when up a sufficient height, place the other foot (left) in the spare loop, and grasp a rope with each hand.

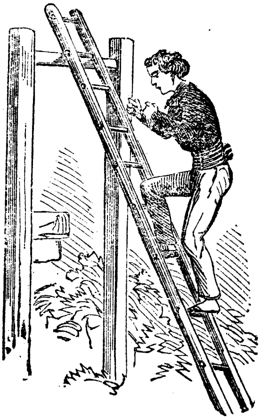
Cross the feet one over the other, to keep them together, and pass the arms to the front, grasping the ropes, as above shown, about the height of the hips, lean forward, throwing your feet up slightly behind, and you will turn completely over.

THE GIANT STRIDE

Consists of a pole, with a swivel at the summit, to which several ropes of equal length are attached, with small cross-sticks at their extremities. The boys take hold of the cross-stick or handle with one hand, grasping the rope with the other (see Illustration), and starting together, commence running round the pole, leaning the chief weight of the body on the hands, and only letting the tips of the toes touch the ground at intervals. Care must be taken to keep time, so that no runner trips up the companion in front of him, as this will disorder the whole economy of the exercise. After a time, a great velocity will be attained, and a mere occasional touch of the toes on the ground will be sufficient to carry the players round and round the course, literally with giant strides. Care must be taken that the boys vary the direction in which they run. In all gymnastic exercises they should be taught to depend upon the right leg and left leg, and right arm and left arm equally; and a habit of running in one direction with the giant stride, say from right to left, would give the right arm and right leg too much work, and develop them at the expense of the left limbs.



THE LADDER.



The first use of the ladder exercises in gymnastics is to give confidence to the boy, and to teach him to depend on his power of balancing himself, in mounting or descending, without the aid of his hands. To do this, keep the knees a little bent, and hold the hands slightly forward in front of the chest, as shown in the illustration. Keep the body always in the same position, fixing the eye upon one point—for instance, the fourth ung of the ladder above the lower foot—and ake care that the eye moves upward in the ame ratio with the feet, always keeping four ungs above the step on which the lower oot is resting. Observe the same rules in escending the ladder.

To mount the ladder by the hands, stand underneath it and grasp the sides of the ladder, above your head, and work the hands alternately upward, slightly drawing up the body by the elbows, keeping the feet quite still. Work your way downward in the same manner. To mount with the hands by the steps, stand under the ladder, grasping the highest rung you can reach with both hands; then raising yourself by the elbows, grasp at the next rung, and so work your way up till you get to the highest. Descend in the same manner.

STILTS

Are useful in teaching boys to maintain a balance; a thing many boys of larger growth find rather difficult of achievement. Of course learners should never practise with stilts fastened at the knees, such as we see used by exhibitors, for a fall from a pair of stilts of such construction would be exceedingly dangerous. The stilts should be long poles or bars of wood, with cross-pieces screwed to them for the feet to rest on. There should be nothing like straps or bands to fasten the stilts to the feet or legs. The learner must place the stilts in a slightly inclined position against a wall; then, with his face turned from the wall, let him place himself between the stilts, and put his right foot up to the footboard of the right stilt, and thence mount to the left. Thus he will stand in the stilts leaning against the wall, with the upper part of the stilts resting against his shoulder-blades, his hands grasping the stilts at the sides, and his chest thrown well forward. Then let him set off and try to walk.

TRICKS AND FEATS OF GYMNASTICS.

The Book.—Fix an old book between the toes of the feet, and, by a jerk, throw it over the head.

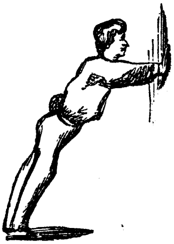
The Chalk Line.—Draw a line with chalk on the floor; against this place the toes of both feet; then kneel down and rise up again without leaving the line, or using the hands.

Stepping Through.—Take a small piece of cane about a foot long, and holding it between the hands, leap through it. Afterward take a tobacco-pipe, and perform the same feat without breaking; after this, join the hands together, and leap through them, which is not very difficult of accomplishment.

Armless.—Lying upon the back with the arms across the chest, the attempt must be made to rise on the feet again.

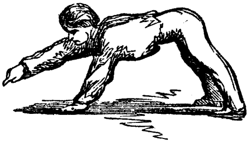
Hop Against the Wall.—Stand with one toe close against the wall, about two feet from the ground, and turn the other over it, without removing the toe from the wall.

Stoop if You Can.—One boy having placed his heels against the wall, another must place near his toes a dime, and tell him he may have it if he can pick it up. This he will find to be impossible for him to do while his heels touch the wall, as there is no room for his back to balance the other parts of his body.



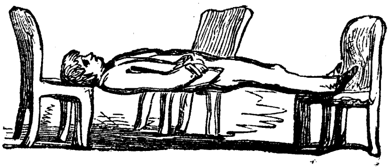
The Spring from the Wall.—Placing yourself at a proper distance from the wall with your face opposite to it, throw yourself forward until you support yourself by one hand. Then spring back into your former position. Begin this feat at a short distance from the wall, and increase the distance by degrees. The "athlete" will, in a short time, be able to stand at nearly the length of his body from the wall. This feat is sometimes called the palm spring, but the palm has really nothing to do with it. The thumb spring is similar, but dangerous, and many have sprained their thumbs in attempting it.

The Long Reach.—This is a somewhat difficult feat, and requires great caution in its performance. A line is chalked on the floor, at which the toes must be placed, and from which they are not to remove. The left hand is then to be thrown forward in a long reach until the body descends upon it, without any part touching the floor in its descent; the right hand is now to be stretched out as far forward as possible, and with a piece of chalk a mark is made on the floor at its fullest extent, the body being sustained by the left hand during the operation. The boy should now recover the upright position on his legs, by springing back from the left hand without touching the floor in any way. The length reached, and the perfection with which the body recovers itself, distinguishes the winner of the game.



The Stooping Stretch.—In this feat a line is drawn on the floor, at which the outer edge of the left foot is placed, and behind this, at a short distance, the right heel. Taking a piece of chalk in the left hand, the youngster passes it between the legs, and under the bend of the left knee, chalking the floor with it as far forward as he can. He then recovers his position without moving his feet from the line at which they had been fixed.

The Chair Feat.—Place three chairs in the situation indicated in the cut, and lie down upon them, the head resting on one, the heels upon another, and the lower part of the body on the third or mid-



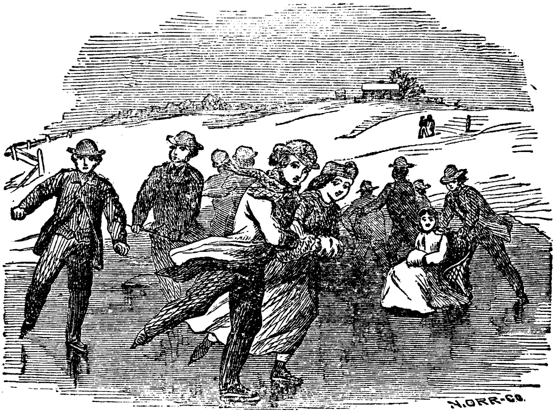
dle chair, which should be much lighter than the others. Then by stiffening the body and limbs, and throwing up the chest into a state of rigidity, it will not be difficult for a boy to remove the middle chair, and to pass it quite over on the other side of him.

The Poker Feat.—Take a common poker and hold it the lower end downward, in the manner shown in the cut, *i. e.*, by the fingers, thumb, and ball of the palm. Then, by the mere motion of the fingers and thumb, and the fulcrum of the palm, work the poker upward till you raise it through the whole length to that part of it which goes into the fire. This trick depends mainly upon the strength of the muscles of the hand and fingers, combined with a certain knack to be acquired by practice.

The Stick Feat, or from Hand to Mouth.—Take a piece of stick of the length of the fore-arm, measuring from the elbow to the end of the middle finger. Hold it in the hand horizontally before you, the knuckles being down and the nails upward, and the elbow being on a line with the hand. Then raise the left end of the stick from the breast to the mouth, without any other movement of the hand than the arm at the wrist. This is a difficult feat, but may be easily acquired by practice.

THE STICK FEAT.

SKATING.



SKATING is deservedly popular. To become a graceful and accomplished skater requires practice, after a study of the principles involved. These things are preliminary to success: The skate to be properly made and securely fastened; and the skater to get rid of fear.

Skates may be had in variety—some with high irons and some with low; some with narrow and some with broad irons; some with the bottom of the irons ground at right angles with the sides, and some with a groove running lengthways through the bottom of the iron.

For beginners a rather low iron is best, and squarely ground. Indeed, the grooved are apt to fill with ice, or "ball" in the groove; and the young skater, instead of "cutting High Dutch," will be cut by a fall.

In fastening the skates, those are to be preferred with three straps, one of which comes around the toes, one around the instep, and one from just below the heel to a spot above the instep. Three small spikes, to fit in corresponding holes in the boot-heel, should be in the heel of the skate. The iron should be at right angles with the surface of the wood, and the holes in the strap should be at a short distance from each other, so as to avoid looseness in the strapping, on the one side, and undue pressure on the foot, on the other.

THE START.

We will suppose the novice's skates have been fastened on for him, and he stands on his feet, on a well-selected piece of ice, neither so smooth as to increase the difficulty he will find in keeping his feet, nor so rough as to trip him up. As soon as he stands upright, he should start at once. Inclining his body a little forward toward the right leg, he slides forward, with his whole weight on the right foot, which must be slightly turned outward, his other foot being slightly raised off the ice, and kept behind the right. (*See Illustration.*) He then brings the left foot forward, in its turn, and slides a yard or two on that foot, and so on alternately. He may, at first, make use of his hands to maintain his balance, raising or depressing them, with the fingers turned upward. He should, however, aim at skating, after a short time, entirely without the use of his arms, which look much better hanging carelessly by the side, than flung wildly about in wind-mill fashion. Some learners make usè of a stick at first starting. This we think a bad plan. It is better, at first, to have the support of a companion, who can skate (Fig. 1), and, by degrees, he may leave you to your own exertions. The learner should proceed patiently, and with caution, at first, and be content to increase his speed gradually with

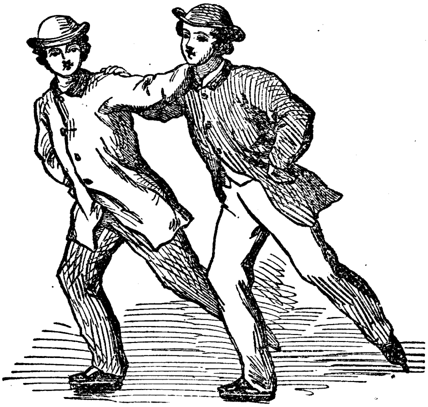
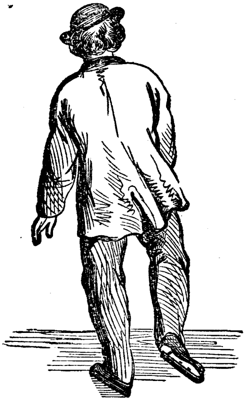
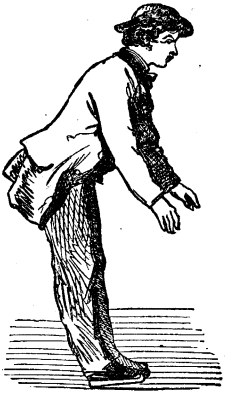


Fig. 1.



STARTING OFF.



STOPPING.

his knowledge; the opposite extreme, however, must also be avoided, for no one ever becomes a good skater who is afraid of a fall. When the inside edge movement has once been learned, the skater will find that his progress is greatly hastened by a push given to the ice with the left skate, as he starts with the right foot, and *vice versâ;* but, above all things, let him thoroughly understand "inside edge," and be confident of his own powers, before he begins practising the feats we will now describe. But first the skater must be taught

HOW TO STOP.

Bring the second foot down upon the ice, and glide forward, with both feet pointed in front of you, and parallel to each other, like the irons of a sledge. Bend the body forward, and throw all the weight upon the heels of the skates. Those who wear the skates with rounded heels cannot, of course, stop in this way, as the rounded irons, instead of sticking into the ice, would trip their wearer up; he puts the second foot to the ground, at right angles with the other, pointed entirely sideways, which immediately stops his career.

HOW TO PERFORM THE VARIOUS EVOLUTIONS.

Before the skater attempts to cut figures and other devices, he must be able to skate on the outside edge of the skate, to skate backward, and to turn round. The *outside edge* implies what it is by its name; when acquired, it sends you exactly in opposite directions, on both sides, to what the *inside edge* does. In explanation: Suppose that you are skating on the *right* foot, it is easy to turn to the left, but not so to the right, to effect which you must use the *outside* edge, by striking out upon it either foot, inclining, at the same time, the skate, the leg, the body, and the head toward whichever side you are skating, holding the other foot raised up behind, and rounding the arms. The most difficult forward movement is the cross outside edge, which is done by passing one leg across the other, and striking out with the foot as it comes down on the ice. As the foot on which you first rested disengages itself (which it will do as you proceed) from the crossed-leg position, throw that leg over the other, and, by continuing this, you will soon learn to sweep round on either side with ease. This is called the Mercury figure.

The salute in a right line is not easy of execution. Having first struck out, you must place the feet in a horizontal line, elevating and rounding the arms. Continue the movement as long as you can, or think fit to do so. This attitude, though difficult, is frequently practised by good skaters.

The salute in a curved line is much easier. Having started, you put your feet in the position you would adopt to describe the salute in a right line (see Fig. 2), only less horizontally. The head and body must be upright, the arms rounded, the hands placed on the haunches; in this position you describe a circle. You then draw yourself up, the knees having become slightly bent, and, raising the right or left foot, prepare for another evolution; as either striking out straight forward, or toward one side.

To describe circles and curves will be found the most graceful and useful of evolutions. To describe a curve on the outside edge forward, fix on some point as a centre, and take a run proportioned to the number of curves you propose describing. Strike out on the outward edge, turning in a curve round the centre fixed upon. Your eyes must look toward the shoulder opposite that which directs the general movement of the side on which you turn. The hips must be kept in, and the leg on which you are propelled bent slightly at the knee-joint; the opposite leg must also be bent, and thrown backward, to modify, by its weight and position, the impulse forward, and to insure your equilibrium.

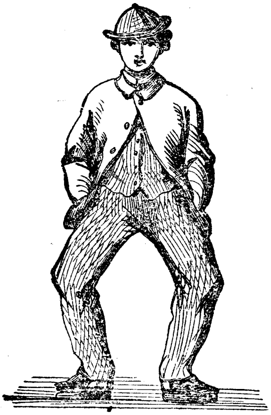


Fig. 2.

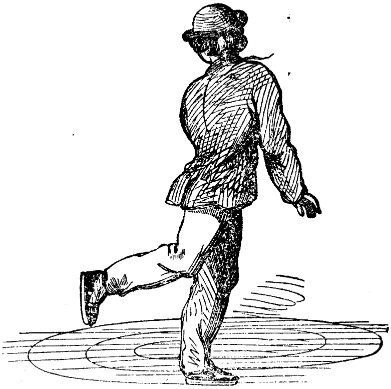


Fig. 3.

To describe a curve, or circle, on the inside edge forward, you must select a small piece of cork, or any other light body, as a centre, take a sufficient run, and strike out on the inward edge. Your head and body must be in the position described for outward curves, only the leg on which you skate must not be bent. The opposite leg should be almost stiff, and the foot about eighteen inches distant from the one you rest upon. (See Fig. 4.) Curves on the inside edge are terminated by stopping in the usual manner; but if you desire to *pirouette*, or turn round, you throw the foot on which you do not skate over that on which you do, and, from the impulse given to your body, in order to describe the curve, you spin round on the middle of the skate, as on a pivot. After having done this a few times, you bring down the foot you are not revolving on, and proceed to other evolutions.

To skate backward, you must incline the head and body slightly forward, in order not to lose the centre of gravity. Strike out behind on each foot alternately, and raise the heel of the skate slightly up from the ice; by this operation each foot will describe an arc or segment of a circle. Should you feel to be losing your equilibrium, bring both skates together upon the ice.

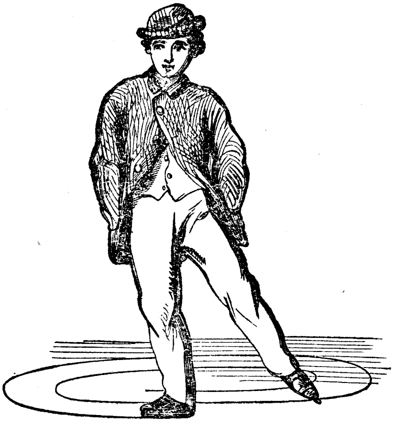


Fig. 4.

This evolution is performed sometimes on one foot, sometimes on the other, and occasionally on both together, by the help of a slight motion of the hips.

Retrograde or backward curves differ from ordinary curves by their direction only; and at first sight appear difficult, because a person cannot move backward with the same facility that he can go forward. When, however, you are used to this manner of skating, it will appear natural and tolerably easy of execution. The backward curve is of equal importance with the ordinary curve on the outside edge, and constitutes the base of all retrograde or backward figures. In this evolution the position of the arms and head is not the same as for the ordinary curve on the outside edge. When executing the outward retrograde curve, your face must be turned toward the left shoulder. The backward curve may be extended to circles, spiral rings, as shown by Figs. 5 and 6, and be finally concluded by the *pirouette*.

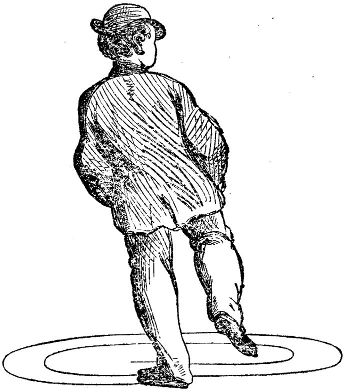


Fig. 5.

The oblique stop is the most proper to adopt when you are skating backward. In order to perform it, when engaged in a retrograde movement, you bring down on the ice in an oblique and transverse position the skate on which you are not resting, stiffening at the same time the leg you thus bring down. The effect of this manœuvre is prompt and certain, and the only variation it admits of is, that it can be performed on either foot.

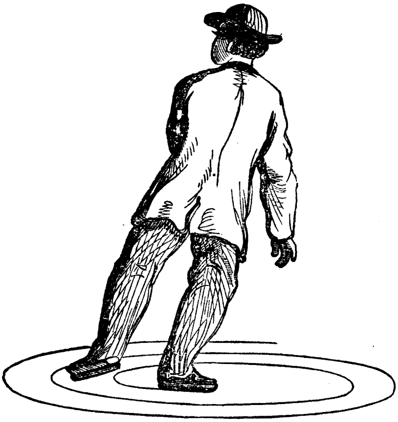
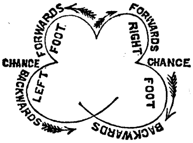


Fig. 6.

To turn round, bring either heel behind the other, and you turn as a matter of course. By carefully attending to the above directions, with practice, you will be able to cut the numerical figures, or any device that you may wish. The figure 8 is the best practice, and is described by completing the circle on the outside edge forward. This is performed by crossing the legs, and striking from the outside instead of the inside edge. To cross the legs, the skater, as he draws to the close of the stroke on his right leg, must throw the left quite across it, which will cause him to press hard on the outside of the right skate, from which he must immediately strike, throwing back the left arm and looking simultaneously over the left shoulder, so as to bring him well up on the outside edge of the left skate. The 8 is formed by completing a perfect circle, in the manner described, on each leg, before changing the foot. The figure 3, which is performed on the inside edge backwards, may next be practised.

No pains should be spared upon this figure, as it is a most elegant one, and is, besides, the key to all figures. When the 3 is once mastered, other figures become quite easy. The mode of doing it is this: Start on the right foot as if going to make an 8, but do it as gently as possible. But, instead of swinging the left foot round so as to make a circle, *let it remain at least a foot behind the right foot.* The consequence of doing so is, that when three-fourths of the circle are completed, the off-foot gives a curious sway to the body, and the skater spins round on his right foot, changing at the same time from the outside to the inside edge, and cuts the second half of the 3 backwards. When the skater can do this easily with the right foot, he should practise it with the left; and when he can cut the 3 with equal ease with either foot, he should cut two together, as seen in the drawing. Let the reader here refer to the drawing, while we trace the skater through it. He begins with the left hand 3, starting with his left foot on the outside edge; when he gets to the twist of the 3 he spins round, and finishes the figure (still with the left foot) *on the inside edge backward.* His right foot is now at liberty to pass to the top of the right hand 3, which he cuts in like manner. Especial care must be



taken to keep the knees straight, and to preserve a graceful carriage of the body. If the skater should be so far off his balance as to find any difficulty in spinning round, he will gain his object by throwing his weight a very little toward the toe of the skate. The reason why the skater curves round in this twist is, that the steel of the skate has a curved form; and when for a moment the body is quite upright, the whole skate spins round on its centre, as on a pivot.

GENERAL DIRECTIONS TO BE FOLLOWED BY PERSONS LEARNING TO SKATE.

1. Let your dress fit closely, but at the same time be of sufficient ease to insure freedom of motion. Neither skirts to coats nor full trousers should be worn.

2. Let flannel be worn next the skin by the delicate, and an extra under-garment by the robust. Let the chest be well defended against the cold. A piece of brown paper laid between the waistcoat and shirt is one of the best chest protectors.

3. Be careful in venturing upon the ice, unless it be sufficiently strong to bear the weight of the number that flock to it; and watch for the increase of numbers, that you may retire before danger ensues.

4. Avoid rough and very smooth ice, and look carefully out for obstructions thereon; such as small twigs of trees, stones, or "hobbles;" as well as for rotten ice, cracks where the ice has risen higher on one side than the other, or holes. Should you suddenly come upon rotten ice, do not stop, but pass over it as rapidly as possible. Should you fall down upon it, roll lengthwise toward the firmer part, without attempting to stand or walk upon it.

5. Should the skater fall into a hole, he should extend his pole or stick across it, and hold on to it till assistance arrives; should he have no stick, he may extend his arms horizontally across the edges of the ice, till a rope can be thrown to him.

6. After an unlucky immersion in the water, the unfortunate skater should immediately take off his skates, and, if able, run home as quickly as he can.

He should then pull off all his wet clothes, take a tablespoonful of brandy in a glass of hot water, rub himself thoroughly with dry towels, and go to bed.

SLIDING.

SLIDING is performed by taking a short run (gradually increasing the speed as you approach the slide), and simultaneously jumping on the left foot, and striking out forward with the right. You maintain your balance by varying the position of the arms, which are raised upward and slightly curved, the nails of both hands pointing toward the head.

In accomplishing a long slide, when the impetus you have first acquired fails to carry you the entire length, it may be revived by slightly stooping, and then quickly raising your body, at the same time lounging forward with the right arm as in fencing.

SWIMMING.

It is astonishing how many persons are ignorant of this useful and necessary accomplishment. An American, who has more of the travelling mania than the native of any other country, should, by all means, be master of it; as he runs a risk of sudden immersion in water during his wanderings, and, should he be no swimmer, stands a great chance of being drowned.

A horse, or a dog—indeed, most animals—will swim when thrown into the water; and, among savages, children are taught to swim at a very early age. An Indian who could not swim would be a wonder to his tribe. Among civilized men, however, the proportion of those who swim to those who do not, appears to be less than one-half. And yet the art of swimming is easy to learn—a little confidence and care only being required.

In the essential part of swimming, *i. e.*, in the art of keeping the head above the water, there is literally no skill at all. Confidence in the sustaining power of the water is the only secret; and if the novice will only dare to trust in the water, and will remember three simple rules, he cannot possibly sink below the surface. These are the golden rules of swimming:

Rule 1.—Keep the Hands and Feet well below the Surface, and Immerse the whole Body up to the Chin.

The reasons for this rule are simple, and are based upon common sense. Every one, with the least smattering of physical science, knows that the flotation of various bodies is exactly in proportion to the quantity of water displaced. No man can stand upright upon the water, because the amount of water displaced by the soles of the feet would not counteract the weight of the body. And, it will be seen, by the simple carrying out of this principle, that exactly in proportion to the immersion of the body is it sustained by the water.

All practical swimmers know that when a man swims with his whole head and part of his shoulders out of the water, he cannot endure for any length of time, because the force that ought to be used in propulsion is wasted upon sustaining the body.

Every inch of the body that is raised above the surface becomes a dead weight, pressing the body under water and calling for great exertion on the part of the swimmer. Many persons, when they fall into the water, plunge about and try to lift themselves out of it, acting as if they were attempting to kneel upon its surface. This action is instinctive, and is one of those where instinct is inferior to reason. In point of fact, ninety-nine out of every hundred who perish in the water, drown themselves as effectually as if they had tied a heavy weight round their necks.

The weight of the head, breast, and arms of a human being is, on the average, about forty pounds; and when a drowning person lifts those portions of the body above the surface, he practically acts as if he fastened a forty-pound weight upon his head.

Every one who has attained some knowledge of swimming, and tries to perform the feat of holding one leg out of the water, is made practically aware of this fact.

RULE 2.—HOLLOW THE SPINE AND THROW THE BACK OF THE HEAD UPON THE SHOULDERS.

Like all the rules in swimming, this is founded upon common sense.

Bulk for bulk, the body of an ordinary human being is about the same as that of the water. There are, however, two exceptional portions—namely, the head, which is somewhat heavier, and the chest, which is much lighter. Any one will, therefore, see that it is most essential to support the former upon the latter, as well as to make the water support both as much as possible.

By hollowing the spine and throwing the back of the head upon the shoulders, the heavy, solid mass of the brain is supported by the air-filled lungs, and the eyes and nostrils are kept above the surface. As to the mouth, that may be above or below the surface, for, if the lips be kept firmly closed, and respiration conducted through the nostrils, no water can enter.

The chief object in hollowing the back is, that it aids the swimmer in keeping his nostrils out of the water. No viler habit can be found than that of rounding the back, and there is none which is so difficult to eradicate.

RULE 3.—MOVE THE LIMBS QUIETLY.

A good swimmer is at once distinguished by the ease and quietude of all his movements. The arms and legs are flung out to their fullest extent, sweep round in the water equably, and are drawn up for another stroke, without the least hurry. The bad swimmer, on the contrary, never waits long enough to make a full stroke, but gives short and hurried jerks with his arms and legs, never extending them more than half their length.

The *slow stroke* is the very essence of good swimming. Of course, we are not speaking of racing, when the strokes are necessarily quick and powerful, but merely of the method of obtaining a good and enduring style. Try how far you can go at each stroke, and do not draw back the limbs until the force of the stroke is all but exhausted. At first you will appear to make but little progress; but the endurance of the long, slow stroke is surprising, and its speed by no means contemptible.

Dr. Franklin, himself an expert swimmer, recommends that at first a familiarity with the buoyant power of water should be gained; and to acquire this, he directs the learner, after advancing into the water breast high, to turn round, so as to bring his face to the shore: he is then to let an egg fall in the water, which, being white will be seen at the bottom. His object must now be by diving down with his eyes open, to reach and bring up the egg. He will easily perceive that there is no danger in this experiment, as the water gets shallower of course towards the shore, and because whenever he likes, by depressing his feet he can raise his head again above water.

The thing that will most strike beginners will be the great difficulty they experience in forcing themselves through the water to reach the egg, in consequence of the great resistance the water itself offers to their progress: and this is indeed the practical lesson derivable from the experiment; for the learner becomes aware of the very great sustaining or supporting power of water, and hence has confidence. This sustaining power of water is shown under many circumstances: thus, a stone which on land requires two men to remove it, might in water be easily carried by one. A man might walk without harm on broken glass in deep water, because his weight is supported by the water. This knowledge of fluid support constitutes the groundwork of all efforts in swimming, or in self-preservation from drowning.

Dr. Arnot, in allusion to this subject, says that many persons are drowned who might be saved, for the following reasons:—

1. From their believing that their constant exertions are necessary to preserve the body from sinking, and their hence assuming the position of a swimmer, with the face downward, in which the whole head must be kept out of the water, in order to enable them to breathe; whereas, when lying on the back, only the face need be above the water.

2. From the groundless fear that water entering by the ears may drown as if it entered by the mouth or nose, and their employing exertions to prevent this.

3. The keeping of the hands above water, already alluded to.

4. Neglecting to take the opportunity of the intervals of the waves passing over the head, to renew the air in their chest by an inspiration.

5. Their not knowing the importance of keeping the chest as full of air as possible, which has nearly the same effect as tying a bladder full of air around the neck would have.

But although floating in water is sufficient to preserve from immediate danger, this will not alone enable us to swim. To swim, does not mean simply to float, but to progress; and progression by this means depends, like the flight of birds, upon the law in mechanics of every action being followed by a corresponding reaction, but in an opposite direction; and thus, as the reaction of the air compressed by the downward action of the bird's wing, causes it to mount aloft in proportion to the force it communicates by that motion; so, the backward stroke communicated by the simultaneous movement of the hands and feet of the swimmer, causes his forward progress in the water. When once familiarized with the support derived from the water itself, he soon learns to make the stroke correctly, especially if aided and supported by some more experienced friend,—a far better assistant than corks and bladders.

PLACES AND TIMES FOR BATHING AND SWIMMING.

It is presumed that most young lads who go to bathe will take the opportunity of learning to swim. In crowded cities there are but few places in which the youngster can learn the art: but in the country there are many rivers, ponds, canals, or lakes, where both bathing and swimming may be indulged in without annoyance. The best kind of place for bathing is on a shelving gravelly shore, on which the water gradually deepens, and where no awkward sweep of current may take the bather off his legs. The spot should also be free from holes, weeds, and hard stones; and a muddy bottom is to be avoided by all means. Should the banks of such a spot be shaded by a few trees, and should there be close by an open space for a run on the grass after the bathe, so much the better; and the young learner will then have the chief inducement to venture the sudden dip or headlong plunge.

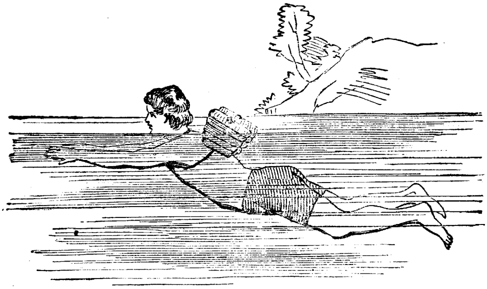
The best time of the day for bathing or swimming is either before breakfast, between the hours of six and eight in the summer-time, or between eleven and twelve in the forenoon. Delicate persons should not bathe early in the morning; and it would be always well to munch a biscuit before early bathing at all times. No one should ever think of entering the water on a full stomach, or immediately after dinner, and never when over-heated and exhausted by fatigue. He should also avoid entering it when cold, or with a headache. Before bathing, it is best to take a moderate walk of about a mile, and while the system is in a glow, to undress quickly and plunge in. It is bad to walk until you get hot, then to sit down and cool, and afterward to enter the water; many have lost their lives by this. It is also very wrong to enter the water during rain, as the clothes are often wetted or damp, which gives the bather cold.

ENTERING THE WATER.

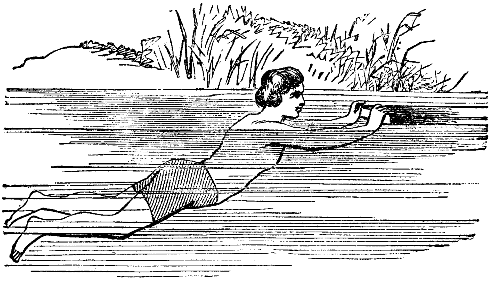
Having stripped the body, the bather should select the best place on the bank for going down to the stream; and then proceeding cautiously but quickly, wade up to his breasts, turn his head to the shore and dip. He then technically, as the boys say, gets his pinch over. Should he not be man enough to proceed in this way, he should, as soon as he gets his feet wet, splash some water over his head, and go into the water more gradually, and try the rapid rush and dip when he gets bolder. He must not attempt to swim or strike out till he can master the feat of going into the water up to his armpits, and till he feels himself confident and void of timidity.

AIDS TO SWIMMING.

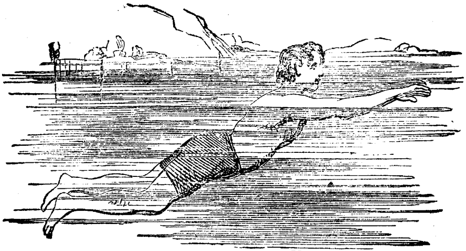
Many aids have been used for the benefit of young swimmers: corks and bladders fastened under the arms are the common ones; but they offer dangerous temptations for bathers to go out of their depth, and then should cramp, cold, or any other accident occur, the event may be fatal. Besides, these aids often slip about from one place to the other. We remember, in our younger days, of the "corks" slipping to the hips, and seeing a young friend, now an old man, suspended in the water with his head downward; while collapsing of bladders and of air-jackets is by no means uncommon. The plank may be serviceable to enable the beginner to throw out his legs and feet. A piece of wood, a yard in length, two feet in breadth, and about two inches in thickness, will be found best adapted for the purpose. When the pupil can support himself without the aid of corks, &c., the plank being thrown into the water, he should grasp one end of it with both hands, and striking out his legs, push it on before him; but if he let go the plank, he will probably be left to sink.



The best aid to a young swimmer is a judicious friend, himself a good swimmer, who will hold up his head, when he strikes off, by the "tip of the finger to the tip of the chin," and who at the same time will show him how to strike off, and how to manage his hands and feet. It is not a bad plan to put out a spar from a boat, to which a rope is attached, which the young learner may make use of by affixing it to a belt round his body under his arms, which will afford him support while he learns to strike his legs in the water. The rope may also be held in the hand of a friend, by the side of the boat, and the learner may strike off hands and feet as the boat proceeds. The plank is a dangerous aid, from its tendency to slip about, and to take the swimmer out of his depth, and although it has many advantages, is very unsafe. The safest plan of all is, as we have before stated, for the learner to advance gradually up to his arm-pits in the water, and then turning about, to strike slowly out toward the shore, taking care to keep his legs well up from the bottom. Rigid perseverance in this course will in a very short time enable the youngster to feel himself afloat, and moving at "all fours,"—a delight equal to that experienced by the child who first feels that he can walk from chair to chair.



STRIKING OFF AND SWIMMING.



In striking off, the learner, having turned himself to the shore, as before recommended, should fall toward the water gently, keeping his head and neck perfectly upright, his breast advancing forward, his chest inflated;

then, withdrawing the legs from the bottom, and stretching them out, strike the arms forward in unison with the legs. The back can scarcely be too much hollowed, or the head too much thrown back, as those who do otherwise will swim with their feet too near the surface, instead of allowing them to be about a foot and a half deep in the water. The hands should be placed just in front of the breast, the fingers pointing forward and kept close together, with the thumbs to the edge of the fore-fingers: the hands must be made rather concave on the inside, though not so much as to diminish the size. In the stroke of the hands, they should be carried forward to the utmost extent, taking care that they do not touch the surface of the water; they should next be swept to the side, at a distance from, but as low as, the hips; and should then be drawn up again, by bringing the arms toward the side, bending the elbows upward and the wrists downward, so as to let the hands hang down while the arms are raising them to the first attitude.

PLUNGING AND DIVING.

There are two kinds of plunging; that belonging to shallow, and that belonging to deep water. In shallow-water plunging, the learner should fling himself as far forward as possible into the stream at a very oblique angle; and when he touches the water, he should raise his head, keep his back hollow, and stretch his hands forward. In the deep-water plunge, his body is to descend at a greater angle; his arms are to be stretched out, his hands closed and pointed, and his body bent, so that his nose almost touches his toes.

Diving is one of the greatest amusements connected with swimming. There are many kinds; the two most common and easiest and necessary modes of going below the surface, are:

1. The feet-foremost jump.
2. The head-foremost jump.

In the first, the legs, arms and head are to be kept perfectly rigid and stiff. The pupil must not allow fear, or the strange sensation felt in the bowels in leaping from considerable heights, to induce him to spread the arms or legs, or to bend his body.

In the second mode, or head-foremost plunge—which is the safest mode for persons who are heavily built about the chest and shoulders, if they have to enter the water from heights,—the head is drawn down upon the chest, the arms stretched forward and hands closed to a point; and as soon as the swimmer feels that he has left the bank, his knees, which till then were bent, are to be stiffened. The diver must avoid striking on the belly—the general consequence of fear; and turning over so as to come down on his back or side—the consequence of pushing with the feet. When he has gone as deep as he wishes, the arms are to be raised and pressed downward.

HOW TO MANAGE THE LEGS.

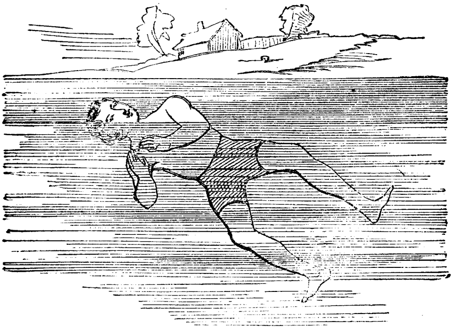
The legs, which should be moved alternately with the hands, must be drawn up with the knees inward, and the soles of the feet inclined outward; and they should then be thrown backward, as widely apart from each other as possible. These motions of the hands and legs may be practised out of the water; and whilst exercising the legs, which can only be done one at a time, the learner may rest one hand on the back of a chair to steady himself, while he moves the opposite leg. When in the water, the learner must take care to draw in his breath at the instant that his hands, descending to his hips, cause his head to rise above the surface of the water; and he should exhale his breath at the moment his body is propelled forward through the action of the legs. If he does not attend precisely to these rules, he must invariably have a downward motion, and as the boys say, swim furthest where it is deepest.

SWIMMING UNDER WATER.

When under the water, the swimmer may either move in the usual way, or keep his hands stretched before him, which will enable him to cut the water more easily, and greatly relieve his chest. If he observes that he approaches too near the surface of the water, he must press the palms of his hands upward. If he wishes to dive to the bottom, he must turn the palms of his hands upward, striking with them repeatedly and rapidly whilst the feet are reposing; and when he has obtained a perpendicular position, he should stretch out his hands like feelers, and make the usual movement with his feet, then he will descend with great rapidity to the bottom. It is well to accustom the eyes to open themselves under the water, at least in those beds of water that admit the light, as it will enable the swimmer to ascertain the depth of water he is in.

SWIMMING ON THE SIDE.

In this, the body is turned either on the left or right side, while the feet perform their usual motions. The *arm from under* the shoulder stretches itself out quickly, at the same time that the feet are striking. The other arm strikes at the same time with the impelling of the feet. The hand of the latter arm begins its stroke on a level with the head. While the hand is again brought forward in a flat position, and the feet are contracted, the stretched-out hand is, while working, drawn back toward the breast, but not so much impelling as sustaining. As swimming on the side presents to the water a smaller surface than on the waist, when rapidity is required, the former is often preferable to the latter.

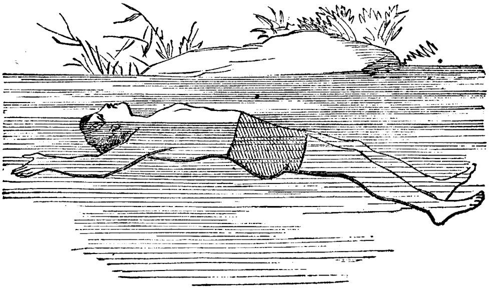


SWIMMING ON THE BACK WITHOUT EMPLOYING THE FEET.

This is twofold: 1. *In the direction of the feet.* The body is placed in a horizontal position, the feet are stretched out stiffly, and the heels and toes are kept in contact; then the body is to be somewhat curved at the seat, the hands are to be stretched flatly forward over the body, and, slowly striking in small circles, the loins are somewhat drawn up at each stroke. 2. *In the direction of the head.* The body is placed horizontally, but somewhat curved in the seat, the head in its natural position, the arms are kept close to the body, with the elbows inclined inward, and the hands describe small circles from the back to the front, at about a foot and a half from the hips. These modes serve to exercise and strengthen the arms in an extraordinary degree without in the least fatiguing the breast.

FLOATING.

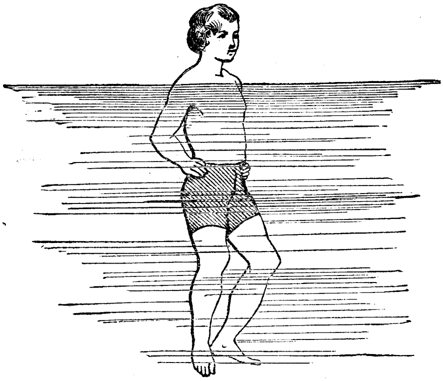
The body is laid horizontally on the back, the head is bent backward as much as possible, the arms are stretched out over the head in the direction of the body, the feet are left to their natural position; if they sink, the loins must be kept as low as possible. In this position, the person, which is



specifically lighter than water, remains, and may float at pleasure. The lungs should be kept inflated, that the breast may be distended, and the circumference of the body augmented. In order not to sink while in the act of taking breath, which the greater specific weight of the body would effect, the breath must be quickly expelled, and as quickly drawn in again, and then retained as long as possible; for, as the back is in a flat position, the sinking, on account of the resistance of the water, does not take place so rapidly but the quick respiration will restore the equilibrium before the water reaches the nose.

TREADING WATER.

This is a perpendicular position of the swimmer, and is of great use to enable him to save a person from drowning. It is in general thought to be extremely difficult, but it is very easy. There are two ways of performing the action: in the first the hands are compressed against the hips, and the feet describe their usual circle; the other mode consists in not contracting both legs at the same time, but one after the other, so that while the one remains contracted the other describes a circle. In this mode, however, the legs must not be stretched out, but the thighs are placed in a distended position, and curved as if in a half-sitting posture.

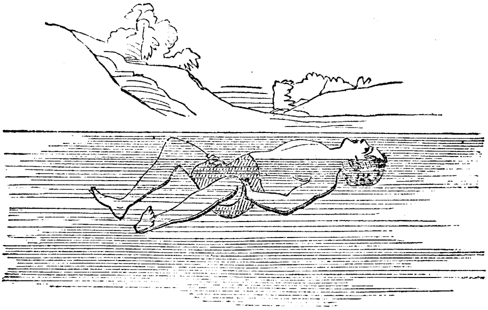


THE FLING.

The swimmer lays himself flat upon his waist, draws his feet as close as possible under the body, stretches his hands forward, and, with both feet and hands beating the water violently at the same time, raises himself out of the water. In this manner one may succeed in throwing one's self out of the water as high as the hips. This exercise is very useful, for saving one's self by catching a rope or any other object that hangs from above the surface of the water, or from any perpendicular height.

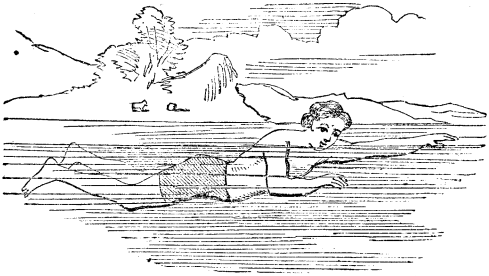
SWIMMING ON THE BACK.

In this the swimmer turns upon his back in the water by the combined motion of the arm and leg, and extending his body, his head being in a line with it, so that the back and upper part of the head may be immersed, while the face and breast are out of the water. The hands should be placed on the thighs straight down, and the legs moved as in forward swimming, taking care that the knees do not rise above the surface in striking them out. Sometimes the hands are used after the motion of a wing or fan, by which a slight progression is also made at the same time that the surface of the body is well lifted out of the water.



THRUSTING.

In the thrust the swimmer lies horizontally upon his waist, and makes the common motions in swimming. He then simply stretches one arm forward, as in swimming on the side, but remains lying upon the waist, and, in a widely-described circle, he carries the other hand, which is working



under the breast, toward the hip. As soon as the arm has completed this motion, it is lifted from the water in a stretched position, and thrown forward in the greatest horizontal level, and is then sunk, with the hand flat, into the water; while the swimmer thus stretches forth the arm, he, with the other hand stretched as wide as possible, describes a small circle, in order to sustain the body; after this he brings his hand in a largely described circle rapidly to the hip, lifts the arm out of the water, and *thrusts* it forward. During the describing of the larger circle the feet make their movements. To make the thrust beautifully, a considerable degree of practice is required. This mode of swimming is useful where a great degree of rapidity is required for a short distance.

THE DOUBLE THRUST.

In the performance of this the arm is thrust forward, backward, and again forward, without dipping into the water; in the mean time, the stretched forth arm describes two circles before it begins the larger one.

TO SWIM LIKE A DOG.

In this motion each hand and foot is used alternately, as a dog uses them when swimming, as the term implies. The hands are alternately drawn toward the chin in a compressed form, and then expanded and slightly hollowed, with fingers close, and, as they strike the water, the feet are likewise drawn toward the belly, and struck backward with a kind of kick. This mode of swimming is of use to relieve the swimmer, from time to time, when going a distance.

THE MILL.

The swimmer lays himself on his back, and contracts himself so that the knees are brought almost to the chin, and while one of the hands keeps the equilibrium by describing circles, the other continues working. Thus the body is kept turning round more or less rapidly.

THE WHEEL BACKWARD AND FORWARD.

In the *forward wheel* the hands are put as far backward as possible, and so pressed against the water that the head is impelled under the surface, and the feet, by a pressure of the hands in a contrary direction, are rapidly flung above the head, which in this manner is rapidly brought again to the surface.

In the *backward wheel* the swimmer lies upon his back, he contracts himself, the hands, stretched forward as far as possible, describe rapidly small circles, the feet rise, and as the point of equilibrium has been brought as near as possible to the feet, the head sinks and the feet are thrown over.

TO SWIM WITH ONE HAND.

The learner, to do this, swims on one side, keeps his feet somewhat deeply *sunk*, while the arm, which in the mean time ought to work, is kept quiet—and might even be taken out of the water. It is a good practice of strength to carry, first under and then over the water, a weight of four or eight pounds.

HAND OVER HAND SWIMMING.

In this process the right hand is lifted out of the water from behind, swung forward through the air with a kind of circular sweep, to the extent of its reach forward, then dropped into the water edgeways, and immediately turned—with the palm a little hollowed—downward, the body being at the same time thrown a little on one side, and the right leg struck out backward to its full extent. The hand descends toward the thigh, and then passes upward through the water in a kind of curve toward the surface. The left hand and leg perform a similar movement alternately with the right, and the measure of progression attained by these combined similar movements is very considerable.

BALANCING.

When the swimmer has obtained ease and confidence in the water, he will find many things easy which before he deemed impossible. Balancing is one of these. To perform it, he has only, when out of his depth, to fall gently back, with his chin elevated to a line passing exactly through the centre of his body, from the chin to the toes, then, folding his arms and remaining perfectly motionless, he may suspend himself perpendicularly: but if he should extend his arms backward, and pass them gradually beyond his head, his toes, tips of his knees, abdomen, and part of his chest, with the whole of his face, will appear, and he will be balanced and float horizontally without the slightest motion

THE CRAMP.

The cramp generally proceeds from acidity of the bowels, arising from a bad state of the stomach, or from the effects of the cold water on the muscular system. Some persons are very subject to it on slight occasions, and such persons will do well never to go out of their depth. But should a tolerable swimmer be seized with the cramp, he should not be frightened, but the moment the cramp is felt in the foot or leg, strike out that foot or leg, with the heel elongated, and the toes drawn upward toward the shin-bone, never minding any little pain it may occasion, as he need not fear breaking a bone, muscle or tendon. Should this not succeed, he should throw himself on his back, and float quietly, and paddle himself gently to the shore. He may also swim with his hands, like a dog, and practise any of the motions of the upper part of the body for keeping his head above water till assistance arrives.

SAVING FROM DANGER.

Above all things, the good swimmer should be anxious to save life, and to rescue those who are in danger, ***without himself becoming the victim, as it***

often happens. The following rules are highly important to be observed: The swimmer must avoid approaching the drowning person in front, in order that he may not be grasped by him; for whatever a drowning person seizes, he holds with convulsive force, and it is no easy matter to get disentangled from his grasp; therefore, he should seize him from behind, and let go of him immediately if the other turns toward him. His best way is to impel him before him to the shore, or to draw him behind; if the space to be passed be too great, he should seize him by the foot and drag him, turning him on his back. If the drowning person should seize him, there is no alternative for the swimmer than to drop him at once to the bottom of the water, and there to wrestle with his antagonist; the drowning man, by a kind of instinct to regain the surface, when drawn down to the bottom, usually quits his prey, particularly if the diver attacks him there with all his power.

For two swimmers the labor is easier, because they can mutually relieve each other. If the drowning person has still some presence of mind remaining, they will then seize him, one under *one arm, and the other under the other*, and without any great effort in treading water, bring him along, with his head above water, while they enjoin him to keep himself stretched out and as much as possible without motion.

SPORTS AND FEATS IN SWIMMING.

1. *The Float.*—In this sport one swimmer lays himself horizontally on the back, with the feet stretched out, the hands pressed close to the body, and the head raised forward. The other swimmer takes hold of him by the extremity of the feet, and, swimming with one hand, impels him forward. The first remains motionless.

2. *The Plank.*—One swimmer lays himself horizontally, as before, another lays hold of him with both his hands, immediately above the ankle, and pulls him obliquely into the water, while he extends himself and impels himself forward; thus both the swimmers drop rapidly the one over the other.

3. *The Pickaback Spring.*—One swimmer treads the water, the other swims near him behind, places his hands upon the shoulders of the first, and presses him down. He then leaves his hold, and puts his feet upon his shoulders, and, flinging himself out of the water, pushes the first toward the bottom. Now he treads water, and the first performs the part of the second, and so on.

4. *The Shove.*—Two swimmers place themselves horizontally on their backs, the legs are strongly extended, and the soles of the feet bear against each other; each impels forward with all his power, and he who succeeds in pushing back the other is the conqueror.

5. *The Wrestle.*—Two swimmers place themselves opposite to each other, tread water, and hold their right hands in the air; the question is, who shall first force his opponent under the water by pressure. Only the head of the adversary is to be touched, and that only by pressure.

THE PRUSSIAN SYSTEM OF PFUEL.

The best of all methods for teaching swimming is that originally introduced by General Pfuel into the Prussian swimming-schools. By this method a person may be made a very good swimmer in a very short time.

The apparatus for teaching consists of a hempen girdle five inches in width, of a rope from five to six fathoms in length, of a pole eight feet long, and a horizontal rail fixed about three and a half feet above the platform, on which the teacher stands, to rest the pole on.

The depth of the water in the place chosen for swimming should, if possible, be not less than eight feet, and the clearest and calmest water selected.

The swimming-girdle, about five inches wide, is now placed round the pupil's breast, so that its upper edge rests on the chest, without getting tight. The teacher takes the rope, which is fastened to the ring of the girdle, in his hand, and directs the pupil to leap into the water, keeping the legs straight and close together, and the arms close to the body, and, what is very important, to breathe out through the nose as soon as his head rises above the water, instead of breathing in first, as every man naturally does after a suspension of breath. The object of this is to prevent the water from getting into the throat, which produces an unpleasant feeling of choking and headache. This expiration soon becomes natural to the swimmer.

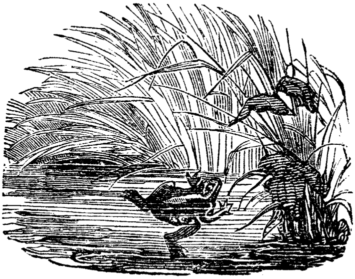
The pupil is next invited to leap. He is drawn up immediately by the rope, pulled to the ladder, and allowed to gain confidence gradually. The rope is now fastened by a noose to the end of the pole, the other end of it being kept in the hand of the teacher; the pole is rested on the horizontal rail, and the pupil stretches himself horizontally on the water, where he remains, supported by the pole. Next the arms are extended stiffly forward, the hands clasped, the chin touches the water; the legs are also stiffly stretched out, the heels being together, the feet turned out, and the toes drawn up. This horizontal position is important, and must be executed correctly. No limb is permitted to be relaxed.

The movement of the limbs is now taught; that of the legs is taught first. The teacher first says, loudly and slowly, "One;" when the legs are slowly drawn under the body; at the same time the knees are separated to the greatest possible distance, the spine is bent downward, and the toes kept outward. The teacher then says briskly, "Two;" upon which the legs are stiffly stretched out, with a moderate degree of quickness, while the heels are separated, and the legs describe the widest possible angle, the toes being contracted and kept outward. The teacher then says quickly, "Three;" upon which the legs, with the knees held stiffly, are quickly brought together, and thus the original position is again obtained.

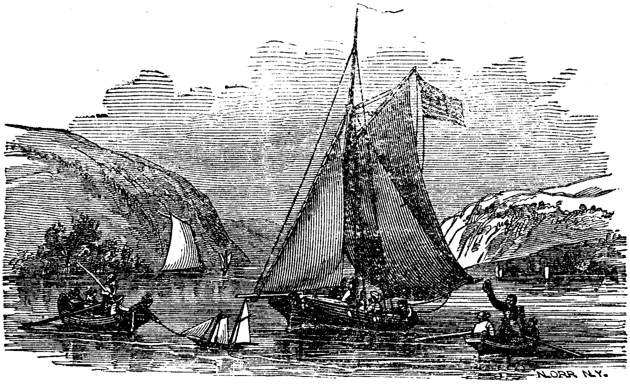
The point at which the motions "two" and "three" join are the most important, because it is the object to receive as large and compact a wedge of water between the legs as possible; so that when the legs are brought together their action upon this wedge may urge the body forward. In ordinary cases of swimming, the hands are not used to propel, but merely to assist in keeping on the surface. By degrees, therefore, "two" and "three" are counted in quick succession, and the pupil is taught to extend the legs as widely as possible. After some time, what was done under the heads "two" and "three" is done when "two" is called out. When the teacher sees that the pupil is able to propel himself with ease, which he frequently acquires the power of doing in the first lesson, and that he performs the motions already mentioned with regularity, he teaches the motions of the hands, which must not be allowed to sink, as they are much disposed to do while the motion of the legs is practised.

The motion of the hands consists of two parts. When the teacher says "One," the hands, which were held with the palms together, are opened, laid horizontally an inch or two under water, and the arms are extended till they form an angle of 90°; then the elbow is bent, and the hands are brought up to the chin, having described an arc downward and upward; the lower part of the thumb touches the chin, the palms being together. When the teacher says "Two," the arms are quickly stretched forward, and thus the original horizontal position is regained. The legs remain stiffly extended during the motion of the hands. If the motion of the hands is correctly done, the legs and arms are moved together; so that while the teacher says "One," the pupil performs the first motion of the hands and legs; when he says "Two," the second and third motions of the feet, and the second of the hands.

As soon as the teacher perceives that the pupil begins to support himself, he slackens the rope a little, and instantly straightens it if the pupil is about to sink. When the pupil can swim about ten strokes in succession, he is released from the pole, but not from the rope. When he can swim about 50 strokes, he is released from the rope too; but the teacher remains near him with a long pole until he can swim 150 strokes in succession, so that should he sink, the pole is immediately held out to him. After this he may swim in the area of the school, under the eye of the teacher, until he proves that he can swim half-an-hour in succession, so that should he sink, the pole may be held out to him; he is then considered fit to be left to himself.



BOATING.



It would be an interesting study to trace the origin of vessels intended for conveying people on the water, commencing with Noah's Ark, the first on record, and coming down through the galleys of the Romans, and the vessels of the Vikings, to the improved ships of the present time. But this would take a great deal of time, and our young readers who are looking after specific information, would doubtless prefer us to get at once to the subject in hand.

OF BOATS.

A *Boat* is properly a vessel propelled by oars. In a more extensive sense the word is applied to other small vessels, which differ in construction and name, according to the services in which they are employed. Thus they are light or strong, sharp or flat-bottomed, open or decked, according as they are intended for swiftness or burden, deep or shallow water, &c.

The *Barge* is a long, light, narrow boat, employed in harbors, and unfit for sea. The *Long Boat* is the largest boat belonging to a ship, generally furnished with two sails, and is employed for cruising short distances, bringing the cargo and bales on board, &c.

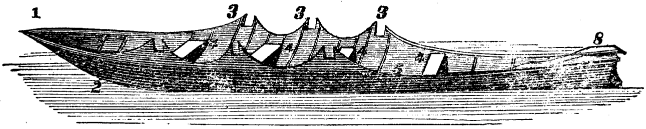
The *Launch* is more flat-bottomed than the long boat, which it has generally superseded. The *Pinnace* resembles the barge, but is smaller. The *Cutters* of a ship are broader and deeper than the barge or pinnace, and are employed in carrying light articles, single passengers, &c., on board.

Yawls are used for similar purposes to the barge and pinnace. A *Gig* is a long, narrow boat, used for expedition, and rowed with six or eight oars. The *Jolly Boat* is smaller than a yawl, and is used for going on shore. A merchant ship seldom has more than two boats—a long boat and a yawl.

A *Wherry* is a light, sharp boat, used in a river or harbor for transporting passengers. A *Punt* is a flat-bottomed boat, chiefly used for fishing on a fresh-water river. A *Skiff* is a small sharp-nosed boat, used in rivers. A *Dingy* is a very small stiff boat used by yachts. A *Yacht* is a pleasure sailing-boat. A *Lugger* is a boat furnished with sails of a peculiar cut. A *Funny*, called in the West a *skiff*, is a little boat with her bow and stern nearly alike. When the bow and stern are both square, this is called a *Scow*. A *Bateau* and *Punt* are the same. A *Canoe* is a long, narrow boat hollowed out of the trunk of a tree. It is sometimes made by stretching birch bark on light ribs of tough and flexible wood. In the West the Mandan tribes of Indians used one covered with skins and nearly round. This was also used by the ancient Britons, and called a *Coracle*. An improved barge is used in New York harbor, where it is known as the Whitehall Boat. For races and regattas, a skeleton boat is built, long and narrow, with outriggers upon which the rowlocks are set.

THE COMPONENT PARTS OF BOATS.

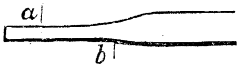
Rowing boats consist of the bows (1); the stem, or entrance (2); the stern (8), where are the rudder and the lines for steering; the rowlocks (3), for giving purchase to the oars; and the thwarts, or seats (4). At the bottom are the foot-boards (5), which are easily removed, in order to bail out any water which may leak into the boat. Besides these parts there is a board placed across the boat for the feet of the rower, called a stretcher. The whole boat is composed of one or more planks, called streaks, nailed upon a light oak framework, called the timbers, or ribs; and the upper streak, upon which the rowlocks are placed, is called the wale-streak. Boats with two rowlocks opposite each other are called sculling boats, and are propelled by a pair of light oars called sculls, the art being called "sculling." When a boat is fitted with a pair of rowlocks not opposite each other, it is called a pair-oared boat. If with two in the middle opposite each other, and two others, one before and the other behind, but not opposite each other, it is called a *randan*. When a boat has four rowlocks, none of which are opposite one another, it is called a four-oared boat, and so on up to ten oars, which is the utmost limit in common use for any kind of boat but the pleasure barge, which sometimes has twenty-four oars. The rowlock nearest the bow is called the bow rowlock, or No. 1; the next No. 2, and so on; and the oars used in them receive the same number, the one nearest the



stern being called the "stroke oar." The rowlocks in river and sea boats are somewhat different in shape though identical in principle, both consisting of a square space of about the breadth of a man's hand, and both lying on the wale-streak; but in river boats being generally bounded before and behind by a flat piece of oak or ash called, respectively, the thowl-pin and stopper; whilst in sea boats they are merely common round wooden pins dropped into holes made in the wale-streak, but still receiving the same names. The thowl-pin is for the purpose of pulling the oar against, whilst the stopper prevents the oar from slipping forward when the rower is pushing it in that direction after the stroke.

THE OARS AND SCULLS.

A scull is a small oar used with one hand, and requiring a pair, as in the case of oars, one being placed in the rowlock on each side the boat, and the pair being used by one person with his right and left hands. Oars are used by both hands, and a pair-oared boat consequently requires two oarsmen; a four-oared boat four, and so on. Both sculls and oars consist of the same parts, except that the handle of the *oar* is made long enough for both hands, as at *a*. In every case there is a rounded handle, *a b*, a loom, square in form, and extending from the handle to the button, or about one-third of the length of the oar; and beyond the button is the blade, which is first nearly round, and then gradually widens, until it assumes the form best adapted for laying hold of the water, which is now found to be broad rather than long, as was formerly thought to be desirable. The button is a piece of leather nailed on to prevent the oar from slipping through the rowlock, but only used in river rowing, as it is not adapted for the rough work which is often met with in sea rowing.



BOATING TERMS.

Weather oar.

Bow oar, the *starboard* upright oar towards the bow of the boat.

Stroke oar, the oar rowed by the strokesman.

Strokesman, the *sternmost* man of the rowers.

Strokeside, the port or right side

Bowman, the man nearest the bow of the boat.

Cockswain, the man who steers the boat.

Thowl-pins, the pins which sometimes are used for the rowlocks.

Headfast, sometimes called the *painter*. A rope fixed forward to fasten the boat after landing.

To unship the sculls, simply means to take them out of the rowlocks.

Rowed off; when this direction is given by the cockswain, all the oars are laid in with their blades forward.

In bow; at this phrase, the bowman gets the boat-hook ready to clear away for the shore.

SEA ROWING.

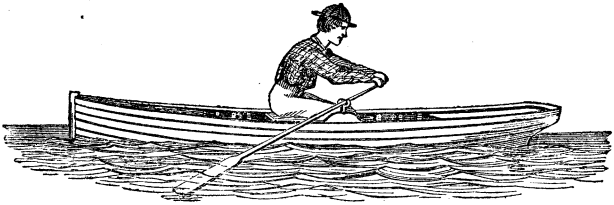
This is necessarily less elegant than river rowing, because of the rough nature of the element on which the exercise is pursued. The oar must be held firmly in the hands, the inside hand being placed at *b*, and the outside at *a*, and both hands grasping the oar between the thumbs and fingers. The whole art consists in the crew moving backward and forward together, called "swinging," and laying hold of the water as well as they can, taking care to avoid pulling in the air with great force when there is a trough or interval between two waves, and on the other hand equally avoiding a heavy wave, which has a tendency to dash the oar out of the hand. All this requires practice in the rowers, and also in the steersman, called the cockswain, who should watch for the high waves, and warn his men when a heavy one is coming. He should also take care to cross the roll of the sea as much as possible, so as to avoid being struck on the side of the boat called "the counter," which would either swamp her or else knock the oars out of the rowlocks. In this kind of rowing, the "feathering" of the oar, to be presently described, is not attempted, on account of the roughness of the water, but it merely is pulled steadily, but strongly, backward, and is then pushed forward in the rowlocks.

RIVER ROWING.

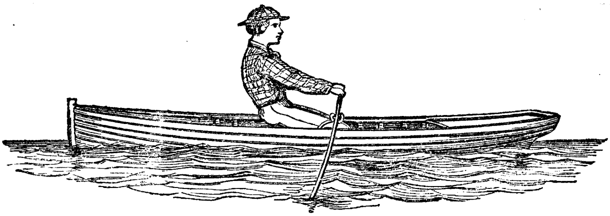
The art of river rowing is capable of a high degree of elegance, and few sights are more pleasing to a lover of graceful forms than that of a crew of fine lads, or young men, rowing well together and in good style. To do this requires great practice, and attention to a few essential points, which we will here endeavor to describe.

MANAGEMENT OF THE OAR.

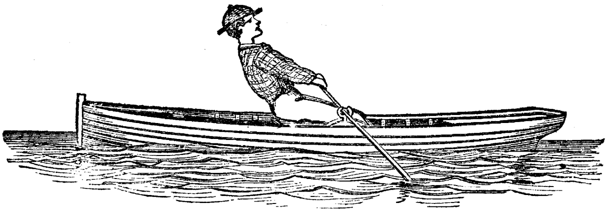
The rower should, as far as possible, take some good oarsman for his model, and endeavor to imitate him in every respect, which is the only mode of acquiring a good style. Description is useful in putting the learner in the way of acquiring what is to be taught, but it is not all-sufficient for the purpose. In the first place, the learner should place himself square on the seat, with his feet straight before him, and the toes slightly turned out. The knees may either be kept together, or separated considerably, the latter being in our opinion the better mode, as it allows the body to come more forward over the knees. The feet are to be placed firmly against the stretcher, which is to be let out or shortened, to suit the length of the individual; and one foot may be placed in the strap which is generally attached to the stretcher in modern boats. The oar is then taken in hand, raising it by the handle, and then either at once placing it in the rowlock, or else first dropping it flat on the water, and then raising the handle it may gently be lowered to its place. The outside hand is placed upon the handle at *a*, *with the thumb as* *well as the fingers above it*, while the other hand firmly grasps it lower down at *b*, keeping the nut toward the person. The arms are now quickly thrust forward until they are quite straight at the elbows, *after which* the back follows them by bending forward at the hips, carefully avoiding any roundness of the shoulders. When the hands have reached their full stretch they are raised, and the blade quietly and neatly dropped into the water; immediately after which, and with the water just covering the blade, the body is brought back with a graceful yet powerful action, till it reaches a part a little behind the perpendicular of the back of the seat, when the hands are brought back to the ribs, the elbows gliding close by the hips; and at the last moment, as the hand touches the rib, the wrist of the inside hand is depressed, the knuckles being at the same time brought against the chest, and the oar is made to



COMMENCEMENT OF THE PULL.

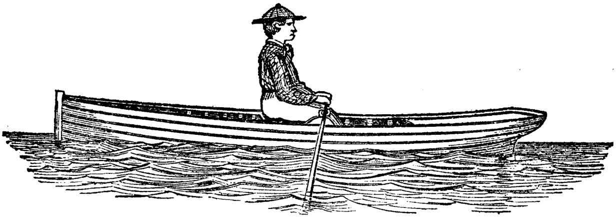


MIDDLE OF THE PULL.



END OF THE PULL.

rotate in the rowlock, which is called "feathering" it, and by which it is brought cleanly out of the water. The next action is to push the oar rapidly forward again, first however restoring it to its original position in the rowlock, which is effected by raising the wrist, and then darting the arms forward till the elbows are quite straight, which brings the rower to where we started from in the description. In "backing water," the reverse of these actions takes place. The oar is first reversed in the rowlock, and then it is *pushed* through the water with as much power as is needed, and *pulled* through the air. When the oars on one side are pulled, and those on the other are backed, the boat is made to turn on its own water. "Holding water" is effected by the oars being held in the position of backing without moving them.



RETURN OF THE SCULLS.

THE ESSENTIAL POINTS IN ROWING.

1st, To straighten the arms before bending the body forward; 2d, to drop the oar cleanly into the water; 3d, to draw it straight through at the same depth; 4th, to feather neatly, and without bringing the oar out before doing so; 5th, to use the back and shoulders freely, keeping the arms as straight as possible; and 6th, to keep the eyes fixed upon the rower before them, avoiding looking out of the boat, by which means the body is almost sure to swing backward and forward in a straight line.

MANAGEMENT OF THE BOAT.

Every boat without a rudder is manœuvred in the water, either by pulling both sides alike, in which case it progresses in a straight line, or by reversing the action of the oars, equally on both sides, pushing them through the water instead of pulling them, and called backing water, when the boat recedes; or by pulling one side only, on which the boat describes a segment of a circle, which is made smaller by pulling one oar, and backing the other. By means of a rudder the boat is made to take a certain course, independent of the rowers, called "steering," the chief art in which consists in keeping the rudder as still as possible, by holding the lines "taut," and avoiding pulling them from one side to the other more than is absolutely necessary. Some steersmen think it necessary to swing backward and forward with a great effort, but this is quite useless, and the more still they keep the better. Every cockswain should know the course of the stream or tide; and when meeting other boats, he should, if he is going down stream, give them the side nearest the shore, so as to allow them the advantage of the slack water, which is quite prejudicial to him. When a crew are steered by a competent cockswain, they ought to be perfectly obedient to his commands, rowing exactly as he tells them. His orders are communicated by the following words, viz.: when desiring his crew to row he says, "Pull all;" or if wishing any one oar to be pulled, he says, "Pull bow," or "Pull No. 3," or 4, etc., as the case may be. If they are to stop rowing, he says "Easy all," or for any one oar, "Easy bow," or No. 2. The same kind of order is conveyed when "backing" or "holding water" is desired; the only variation, as before, being between confining his order to any one or more oars, or extending it to all. In this way all the evolutions practicable on the water are managed, and the cockswain has complete control over the boat, being able to cause her to be rowed slowly or quickly, or to be stopped, backed, or turned on her own centre.

LANDING.

If the tide be in your favor, bring the boat in a rather slanting direction toward the place of landing, so that as you reach the place the tide may take the stern down, as it is always best to land stern to tide. When you get to the landing-place, unship the sculls as before directed: but instead of letting them lie alongside, lay them in the boat, with the looms aft and the blades forward; then take hold of the headfast, jump ashore, and fasten the boat safely. This applies to river rowing; but in landing on the sea-shore when there is a swell, a little more care must be used; your boat, however, will be larger and stronger manned. In this case you must watch for a smooth; as soon as you have it, "give way" with all your power to the shore. The bowman must be ready to jump ashore with the painter in his hand, and pull the boat up out of the reach of the surf; all hands must jump out, after having first laid in their oars as before directed, and help him if he is not strong enough.

Launching a boat from the beach is sometimes a more difficult affair. When there is a considerable swell, and the boat is large (it will of course be strongly manned), the two bowmen get into the boat, with their oars ready to act; the other men equally divided lay hold of each side of her gunwale, entering the water with her and forcing her head to the sea. They must not, however, all jump in until she is fairly afloat, for if she were to ground and ship a sea, the probability is that her head would be turned, and that the next sea would capsize her before they could prevent it. In such cases, loss of life is by no means uncommon. But when the boat is afloat her head is sometimes turned for want of readiness on the part of the rowers; in such case, let two bowmen with oars or boat-hooks go to the bow on the lee of the boat, and by forcing them into the strand push the head of the boat seaward. Lying broadside to a sea is very dangerous, but if care and decision are used the boat can generally be kept head to sea; in fact, it is much more easy to keep it so than to return it, when the surf has once thrown it toward the shore.

A FEW IMPORTANT REMARKS ON CUTTER ROWING.

Each oarsman must be particular to take his time from the strokesman.

While rowing he must be strictly under the orders of the cockswain.

Let it be ever kept in view, that keeping time and keeping stroke are the two great points for an oarsman's attention.

When there is any swell on the water, caused either by the paddles of steamboats or rough weather, care should be taken always to keep the boat's head well facing it.

FAULTS TO BE AVOIDED.

Catching Crabs.—This term implies the act of falling backward from the seat, through not taking hold of the water in the attempt to pull.

Not Keeping Time.—Independent of the awkwardness of the appearance, this habit will be an effectual bar to your rowing in concert with any master of the art. Not keeping time, recollect, is not putting your oar into the water at the same time as the stroke oar.

Not Keeping Stroke.—This, be it observed, is totally different from the preceding fault. It is not doing work at the same time as the stroke oar; and this may be neglected even when you have kept time by putting your oar in the water at the same moment as the strokesman did his. Though not so unseemly, it is yet the most destructive fault that can be committed; for it must be evident that the speed of the boat must depend upon the simultaneous and equal effort of its whole crew. Recollect, therefore, that the pull should commence the moment the blade is properly immersed in the water.

Doubling the Body over the Oar at the end of the Stroke.—This prevents the shooting of the arms and body simultaneously forward, which is a most important feature in good rowing.

Jerking is a fault to which men who are powerful in the arms are particularly liable; as, instead of throwing the body gradually back, and thus partially pulling by their weight, they depend solely upon the muscles of their arms. They, therefore, give a violent muscular effort, which not being continued by falling back, the stroke ends, as it were, too soon, producing a jerk, which destroys the uniform swing throughout the boat, and thus decreases the propulsive power, and ultimately tires out the man. It is very annoying to the other part of the crew.

Rowing Round.—This fault arises from not entering the water deep enough at the first. The rower feels that he has not sufficient resistance (and is in danger of catching a crab), he consequently deepens his water with the blade of an oar, forming a portion of a circle, and brings the flat part of the blade perpendicularly to the water, thereby tending to drag the boat down by its pressure; this is a great fault, and must be avoided.

Slacking the Arms Too Soon.—This not only decreases the power of the stroke, but generally causes a positive impediment to the boat's rapid progress; for the habit is generally accompanied by one or two additional errors, viz., either feathering the scull before it is out of the water; or allowing the boat to carry it along. In the first, you add to your own labor; in the second, you, to a certain extent, stop the boat. Very light boats are apt to cause these faults. The remedy in such a case is, to dip the scull deeper at the commencement of the stroke; but the learner must recollect that the same faults are committed in ordinary boats.

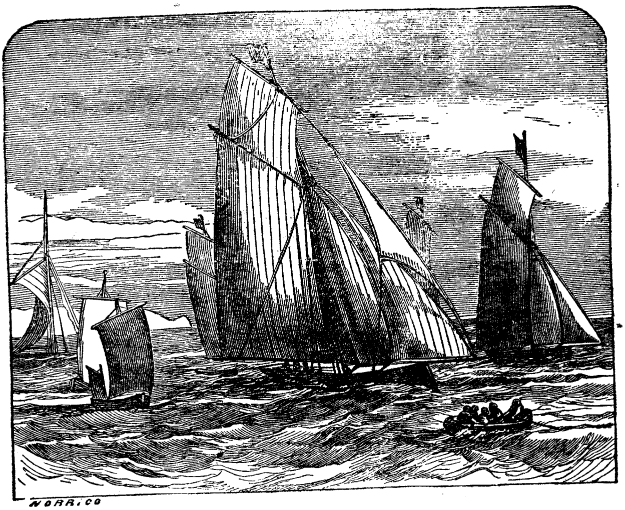
Throwing up water in rowing must be carefully avoided. It is excessively annoying to those on the same side of the boat.

Capping the end of the oar with the hand has a very awkward appearance, and conduces greatly to other faults.

Rowing with a round back is another very common fault, and must be avoided, because considerable loss of power is the consequence.

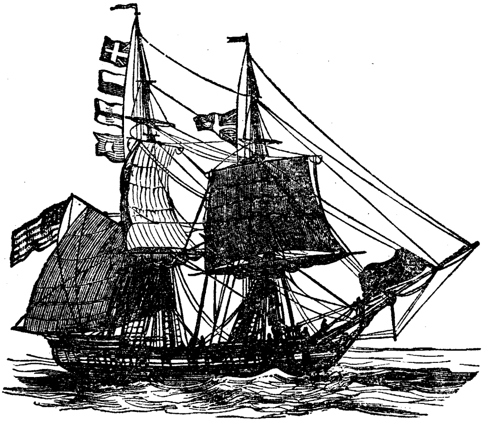
We have now recapitulated most of the faults to which rowers or oarsmen are subjected, and, taken in conjunction with the preceding directions, our hints cannot fail to make any person theoretically acquainted with the art, if he will take care thoroughly to comprehend what we have written. Practice, however, must be had to make a good oarsman. A good theory in the hands of a practical person may lead to perfection; neither theory nor practice alone will do so. The learner must not be disheartened by the difficulties he will be sure to meet with during his first attempts with the oar or scull, not the least unpleasant of which will be his habit of catching crabs.

SAILING.

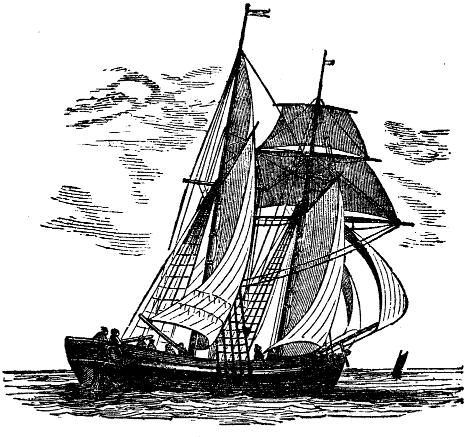


Although the sailing exercise of boys will necessarily be confined to a small boat, it is proper that they should be made acquainted with the distinction between larger vessels, and be furnished with a vocabulary of terms belonging to the art of sailing.

All sailing vessels are set down under the term ships, but, strictly speaking, a *Ship* is a vessel with three masts that are square-rigged; that is, the yards which support the square-sails are rigged at right angles to the masts. But all the sails are not square, the jib being triangular, and the spanker bow-sided, but not square. The *hull* or body of the vessel is divided into the *forecastle*, before the foremast, the *waist*, between the foremast and mainmast, and the *quarter-deck*, which is *abaft* or behind the mizzen-mast. These masts whose names you have had given you, are fitted with other masts, slipping into each other, and securely connected for the purpose of bearing its appropriate sail. Thus, the foremast or forward one is the *foremast*, and bears the *foresail;* the mast above that is the *foretopmast*, and bears the *foretopsail;* the one above that the *foretop-gallant-mast*, and bears the *foretop-gallant-sail.* The mainmast is divided in the same way into mainmast, maintopmast and maintop-gallant-mast, which bear severally the mainsail, maintopsail and maintop-gallant-sail. The mizzen-mast is furnished with a sail rigged on the plane of the vessel's length, or "fore and aft;" and the bowsprit or jib-boom, which projects from the front at more or less of an angle, supports with the foremast a triangular sail called the *jib*, also rigged fore and aft; and has another mast attached to it, called the flying-jib-boom, which supports the flying-jib. There are usually square sails above the top-gallant-sails, that are called "royals," and distinguished by the names of the masts to which they are attached. Then there are additional sails, projecting on either side of the square-sails, that are used in light

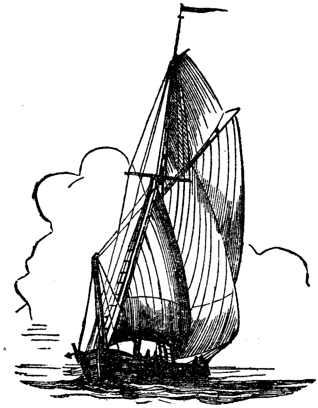


BRIG.



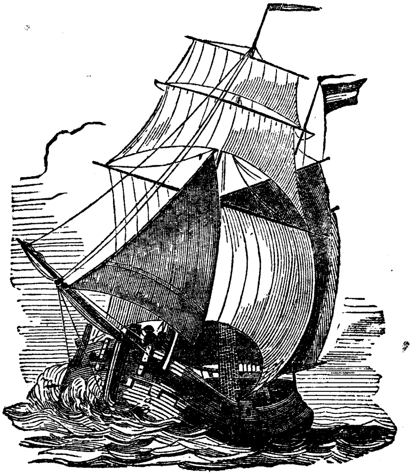
SCHOONER.

winds, called *studding-sails*, and the *booms*, which support them, are attached to the extremities of the several yards. Between the masts are also triangular sails, called *stay-sails.*



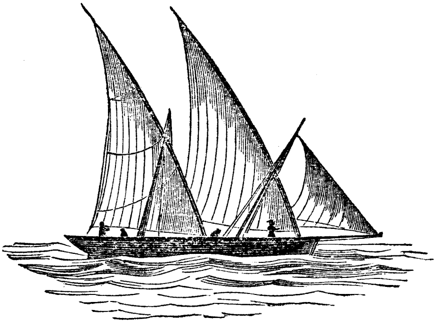
SLOOP.

A *Brig* is rigged on the same principle as the ship, but has only two masts; being a ship, as it were, with the mainmast taken out.



DUTCH GALIOT.

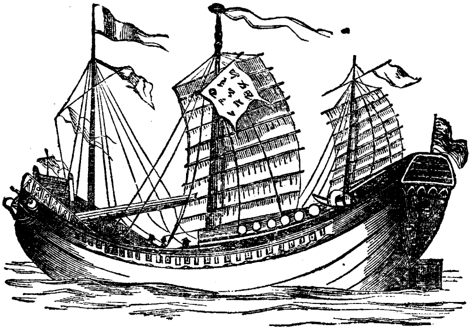
A *Schooner* is a vessel with two masts, rigged fore and aft. She may carry gaff-topsails, which are triangular sails, set above the main and fore-sails, or one or two square topsails before. In the last case she is usually called a "topsail schooner." A schooner has sometimes three masts, and is known as a *three-masted schooner*, or as a *ship-rigged fore and aft.*



FELUCCA.

A *Brigantine* is a schooner, with square sails on the foremast, foretop-mast, and foretop-gallant-masts; being a topsail schooner, with the addition of a foresail.

An *Hermaphrodite Brig*, vulgarly called a "*morfydite*," is brig-rigged fore, and schooner-rigged aft. It is almost peculiar to this country.



CHINESE JUNK.

A *Sloop* is a vessel with one mast, and the sails, which consist of a main-sail, jib, and gaff-topsail, rigged in the plane of its length. The North River sloops are celebrated for their fast sailing.

A *Dutch Galiot* is rigged like a schooner, but of a broader and more Chinese build, her bottom being nearly flat.

A *Billy-boy* is rigged sometimes like a sloop, and sometimes like a schooner; but her bottom is nearly flat, and she draws but little water.

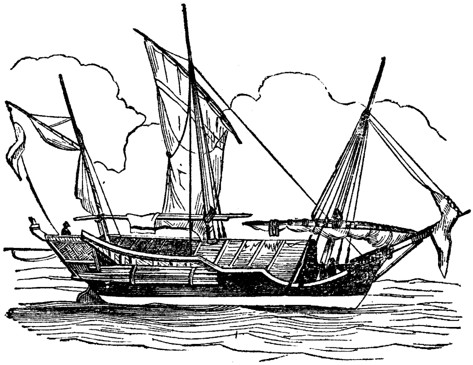
A *Smack* is a small vessel with one mast, like a cutter, used principally for fishing.

A *Felucca* has two triangular sails, is used in the Mediterranean, and is particularly swift. It can also use oars in calm weather.

A *Junk* is a Chinese vessel, used either for war or merchandise. It is built very heavily.

A *Lugger* has two or three masts, with sails hoisted on yards, something like a cutter's gaff-topsail, and some of them carry a jib.

A *Proa* is used by the natives of the Ladrone Islands, and is remarkable for its swiftness and sailing close to the wind. The lee-side is quite straight, and the weather-side is convex, like a common boat. Both head and stern are equally sharp; and in working her there is no necessity to tack or turn at any time. Besides this peculiarity of construction, the proa has on her lee-side what is called an "out-rigger," which is made of two poles, extending about ten feet from her side, having at their extremity a piece of solid wood. This prevents her from having any leeway. She will sail with a good wind twenty miles an hour.


PROA.

We will now speak of the vessels we have most to do with—viz., yachts.

CHARACTERS OF A YACHT.

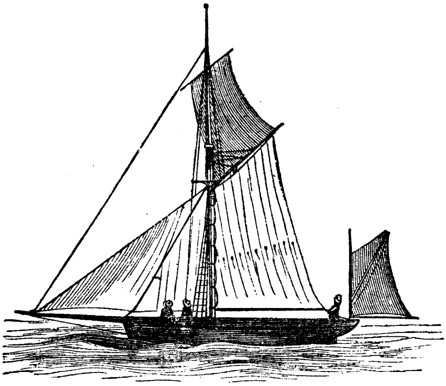
Speed, safety, and accommodation are the three first qualities of a yacht. She ought to be pleasing to the eye when afloat, of such a breadth as to carry her canvas with ease, and at the same time so sharp in her bow and well shaped astern as to displace her weight of water smoothly and gradually, while she leaves it in the same way.

VARIOUS KINDS OF YACHTS.

Yachts are of various kinds, according to their size. If more than eighty tons burden, the schooner is most suitable; for, as the spars are more numerous, they are proportionably lighter. The schooner, as has been before observed, has two masts—the foremast and mainmast; the one bearing the sail called the boom-foresail, and the other a mainsail. She has two or more head-sails, called stay-sail, forestay-sail, and jib. Her topsails are either square or fore and aft.

The *Cutter* has one mast and four sails—viz.: mainsail, maintopsail, foresail, and jib. Some smaller craft have larger jibs, and no foresail.

The *Dandy-rigged Yacht* differs from a cutter, in having no boom for her mainsail, which can consequently be brailed up by a rope passing round it. She has a mizzen-mast standing in the stern, which sets a sail called a mizzen, and which is stretched on a horizontal spar, projecting over the stern. This style of rig is more safe for a yacht, as the boom in ordinary cutters is liable to sweep persons overboard; and the sail can be taken in quicker by brailing it up than by lowering it down.



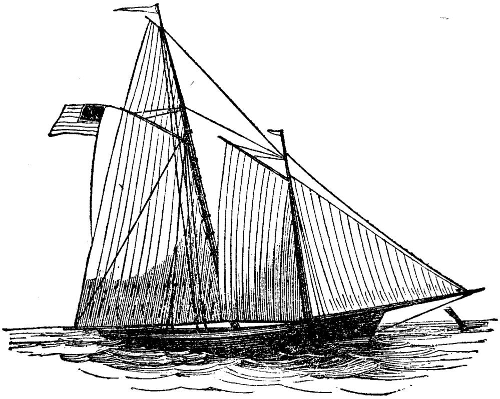
The *Hatteener* has only two sails, a fore and mainsail, of a triangular shape. Each has a spar standing from the deck to the peak of the sail, and a boom at the bottom, like a cutter. This rig, from setting more canvas abaft, is well adapted for narrow waters.

DESCRIPTION OF THE CUTTER-YACHT.

But the vessel with which we have most to do in our directions for sailing is the Cutter-Yacht, which stands closer to the wind than any other kind of boat; and of which we propose, in the first instance, to give a general description.

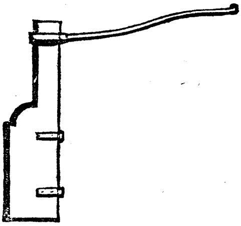
CONSTRUCTION OF THE HULL.

The first step in the construction of the hull is laying down the keel or backbone of the vessel; which is done by fixing a strong piece of wood, generally oak, upon blocks, that the rest of the timber may be securely added; the stem is then joined to the fore-post, nearly at right angles, slanting a little forward as it ascends; and the stern-post to its after or hinder part, sloping upward and backward. The timbers and ribs are next cut out of solid wood, and placed transversely on the keel, their width varying according to the lines of a plan previously drawn out—being, of course, farthest apart at the beam; these, as well as the planks of larger craft, are made to bend into the required shape by being steamed and bolted in while hot. The skeleton being completed, her planks are then secured by copper or iron nails to the timbers, and riveted. The deck is made of narrow planks, running fore and aft. From the level of the deck, her sides are raised by upright timbers, called "stancheons," cased over by the bulwarks, and surmounted by a rail called the "gunwale." Some yachts are only half-decked, the after-part being left open and fitted with seats; but, in order to prevent the water from getting in, a portion of deck, called water-ways, is left at each side; which opposes a further barrier by its terminating on the inner edge in a high crest or combing. The stepping the mast requires great care, since the good or bad sailing of the boat depends very greatly upon it. The model of the celebrated yacht, "The America," after all the study and ingenuity that have been applied to yacht-building, seems to


THE AMERICA.

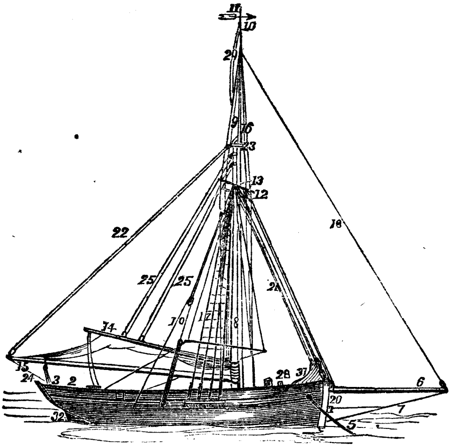
resemble the simple yet beautiful model which nature has given us in the duck. The bow of this vessel rises very gradually for some distance along the keel, like the breast of the duck; and, further imitating the same model, her beam or widest part is abaft, or further back than the centre. This superior vessel will sail nearly four points off the wind. We have now glanced at all the principal parts of the hull, except that all-important part, the rudder; which swings by a hinge from the stern-post, and is moved by a handle fixed to its upper part, bearing the name of "a tiller," and which is used to steer the boat. Before proceeding with our instructions for sailing a yacht, it will be necessary to describe the action of the rudder; as the art of steering is the nicest and most important branch of seamanship.

The rudder is a flat board, with a pole rising up on the side, which is fastened to the vessel; on the top of which is fixed the tiller. In large vessels there are two ropes fastened to the tiller, which are carried through blocks on each side of the vessel; then brought back through blocks fastened on the mizzen-mast, and passed round a wheel, by which means a greater command is obtained over the rudder. When the tiller is moved to the right (starboard), the rudder, of course, is forced in the water to the left (port). As the vessel moves on, the water presses against the rudder on the port side, and thus forces her stern to the starboard side, and her bow to the port. When the tiller is moved to the left, it of course produces a contrary effect. If the ship is moving backward, then, by moving the tiller to the right, the bow is also turned to the right; for the water presses against the rudder behind it on the left side, and thus pushes the stern to the left. In steering, care must be taken not to steer too much—that is, not to move the rudder too violently, or more than is necessary—as this materially stops her way.



We here present the young yachtsman with a cutter at anchor, with her ropes and spars numbered; and which ought to be thoroughly known, as well as the uses to which they are applied in sailing a yacht:

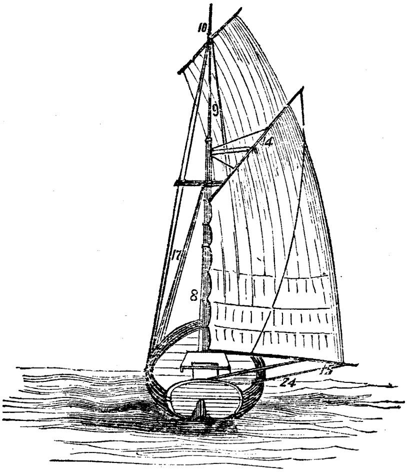
1. Stem.
2. Stern.
3. Tiller.
4. Anchor.
5. Cable.
6. Bowsprit.
7. Bobstay.
8. Mast.
9. Topmast.
10. Truck.
11. Vane and Spindle.
12. Cross-trees.
13. Trussle-trees.
14. Gaff.
15. Boom.
16. Topmast-shroud.
17. Topmast-backstay.
18. Topmast-stay.
19. Runner and Tackle.
20. Traveller for Jib.
21. Forestay.
22. Topping Lift.
23. Lift Blocks.
24. Mainsheet.
25. Peak Halliards.
28. Foresheet.
29. Signal Halliards.
30. Companion.
31. Forecastle.
32. Rudder.



CUTTER AT ANCHOR.

SOMETHING ABOUT THE MASTS, SPARS, ROPES, ETC.

The *Mast* (8) is a spar set nearly upright, inclining a little aft, to support yards and sails. In a yacht, it is kept in its place by two shrouds on each side, made of strong rope, and fastened to the sides of the vessel.



CUTTER BEFORE THE WIND.

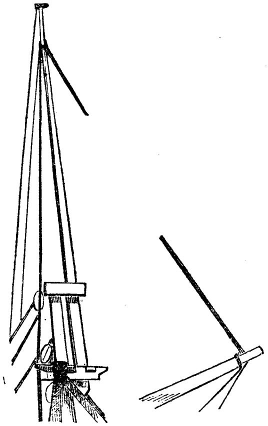
The *Bowsprit* (6) is a spar carried out from the forepart of a yacht, secured at its inner end between two strong posts piercing the deck, called "the bitts." It is kept in its place by the bobstay (7), which is fastened to the stem, and by a shroud on each side secured to the bow.

The *Boom* (15) is that spar which sets out the mainsail below, and is attached at one end to the mast by a swivel cable, called the "goose-neck," and is eased off or hauled in at the other by the main-sheet (24), which is a rope passing from the end of the boom through a block on the side of the vessel.

The *Gaff* (14) sets out the mainsail above, and slides up and down the mast by means of a crescent end, which embraces it. The sides of this curve are called "horns."

The *Topmast* (9) stands above the mast, and is made to slide up and down. On it a topsail (*i. e.*, a gaff-topsail) is set in light winds; but both sail and mast are generally lowered in squally weather. It is kept steady by a backstay (17) on each side of the foretopmast stay. The latter is brought down to the bowsprit.

Ropes.—There are various ropes to hoist and lower sails, called halliards. There are also other ropes of great importance, especially those called the sheets, which are to haul in the sails, and make them stand to the wind. In a yacht, the mainsail has sometimes a sheet on each side; and sometimes only one sheet reeved through double blocks, which travel on an iron rod, called a "horse," from side to side. The jib has two sheets, the starboard and port (right and left). The foresail has the same, except in some instances, when it has but one sheet working on a traveller, like the mainsail. The topsail has only one, which is rove through a sheave at the end of the gaff, and a block at the throat of the gaff, and then down to a cleat or fastening place on the deck. Signal halliards are for hauling up the colors, and pass through a small sheave in the truck (10), at the end of the topmast. The ensign halliards are reeved through a small block at the peak end, and lead down to the boom. The other ropes on board a yacht are for the support of the spars, and are called "standing-rigging," while those used for the sails are called "running-rigging."

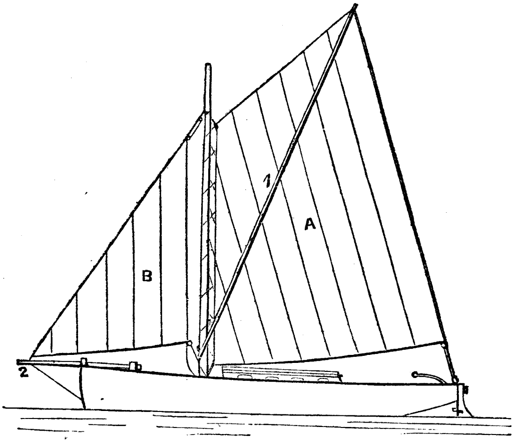


TOPMAST AND FORETOPMAST STAY.

We trust we have given our young readers a tolerable idea of a cutter-yacht. We will now proceed to describe the common sail-boat, a little craft, not so complicated in construction, and one which our juvenile friends will learn how to manage more readily.

THE SAIL-BOAT.

The sail-boat is sloop-rigged, with or without a jib; but differs in the fact that she has no main boom nor gaff, the sail being kept up by a *sprit*. Her rig may be described as follows: She has one mast, with a *mainsail*, A, and a *foresail*, B; one mast, a *sprit*, 1, and a short *bowsprit*, 2. The mast will



ave one *shroud* on each side, and a *forestay* to the stem, each set up by *anyards.* The mainsail will be hoisted by a *main halliard* passing through hole, or over a *sheave* in the mast, and it is a very good plan to have this ole or sheave *above* the shrouds, as also the hole for the fore-halliards, one ole being above the other. The *sprit* fits into an *eye* at the peak of the ainsail, and into a *becket* or *snotter* round the mast; and large boats have a ope to hoist and keep up the snotter. In small boats, the snotter, when vetted, sticks tight enough to the mast. The *mainsheet* works on a *horse* at he stern. The *fore-halliards* pass through a hole in the mast-head, and the oresail is *laced* to the forestay. The *foresheets* lead through holes in the nees. To set the sails, hoist the mainsail by the main-halliards *chock p*, or as far as it will go, and then *belay* the main-halliards to one of the *leats;* then catch hold of the peak of the mainsail, and double the main-ail round forward of the mast; then put the upper end of the sprit into he eye, and shove the sprit up. To do this properly requires practice; in rge boats there is a lashing to keep the eye from blowing off the end of e sprit, and the beginner may put a lashing if he likes. Then put the wer end of the sprit into the snotter, and hoist the snotter up the mast till the mainsail begins to wrinkle from the tack to the peak; then haul the mainsheet taut, and belay it till you are ready to start. The foresail is usually wrapped around the forestay; *untoggle* the sheets and unwrap the foresail, then toggle on the sheets again, ship the *tiller*, and the boat will be ready.

The usual small sail-boat, however, is rigged without a foresail or jib, and the mast, in order to balance it, is set somewhat forward of the spot where it stands in the cut. It has no shroud or forestay, being merely shipped into a thwart running across the boat, and secured in a step below. It is set, too, with more of a *rake*, or pitch backward, than in the cut. Such a boat, which can be safely and easily managed by one, is the best for the young yachtsman.

Getting into his little boat, the beginner, who should have a skilled grown person with him as companion, will soon learn the principles on which a boat *tacks* or is *put about*, how to *jibe* safely, how to *reef* the mainsail and the foresail and how to fit a *reefed snotter*, how to *stow the sail* and *moor the boat*, and how to *pick up moorings* and to *come alongside*. Sailing boats are usually made fast by a chain to a stone under water; when the boat gets *under way*, the chain is let go, and is picked up again by a rope, one end of which is made fast to the chain, the other to a piece of wood or small cask called a *buoy*. To pick up this buoy again, sometimes the sails are lowered and the boat runs at it, but usually the boat is taken to leeward, and at the proper distance is *luffed up*, so as to come head to wind, and stop as nearly as may be over the buoy; and to do this with certainty requires much practice. The beginner should go where he has plenty of room, taking out a buoy or piece of wood, and practise picking that up till he can measure his distance pretty accurately. To do this, however, and in fact to sail a boat at all, a clear understanding of the principles of sailing is of great assistance.

TO SAIL A BOAT.

Everybody can understand how a boat can sail *before the wind*—a box for a boat, with a coat or umbrella for a sail, can do that, but to sail with the wind on the side, or to make way against the wind, is far more difficult; in fact, persons not accustomed to it often doubt the possibility of doing so. In explaining this, we will consider the sails as quite flat, for the nearer they can be brought to flatness the better, and wherever they are not flat there is a loss. Supposing the sails, then, to be flat, and the wind to strike them, part of the force is lost (as will be understood on mechanical principles), part of it presses against the flat surface of the sail, and perpendicularly to it. This tends partly to drive the boat *ahead*, partly to drive the boat bodily to *leeward*, and if the boat was a box or tub, she would go in a direction between the two; but as boats are usually constructed, they are sharp at the fore-end, and the surface opposed in that direction is not more than one-seventh of the surface which the nearly flat side opposes—hence the boat is driven easily ahead, but only a little or not at all to leeward; and boats are constructed so as to oppose as little resistance ahead and as much on the side as possible. Any boat will sail with the wind astern, and most boats will sail with the wind *on the quarter*—*i. e.*, blowing in any direction between the stern and the broadside; but only good boats will sail with the wind *on the bow* or *before the beam*, and then not when the wind is more than *four points* before the beam, reckoning by the thirty-two points of the compass, and to do that, the sails must be well set, and the boat pretty good. To explain how this is effected, let us suppose a boat with her head pointing exactly toward the wind, then her sails will only flap about and tend to drive her astern. Now suppose her bow gradually turned away from the wind; if the sails are hauled pretty flat, after a time, usually when her bow is four points or the eighth of a circle off from the wind, the sails will fill with wind, and, on the principles already explained, she will move ahead. And it is obvious that, after having gone some distance in this direction, she may be put about and go at a similar angle to the wind in the other direction, and will thus have advanced against the wind, or towards the quarter from which the wind is blowing. This is called *tacking* or *turning to windward*, and to do this well is the greatest proof of a good boat or of good sailing. In *sailing to windward*, the sails are trimmed or hauled aft to an angle which varies for each boat, and must be found by experience; they should be kept just full of wind—if empty they are doing no good, or even harm; if too full, the boat is *off her course*, and not doing her best to windward. A rough rule is to keep the flag or vane just over the mainsail. Boats ought always to carry a *weather helm*—*i. e.*, the bow should have a tendency to turn toward the wind. Putting weight in the bow makes the weather-helm stronger, putting it in the stern or increasing the head sails has the reverse effect. When the wind is on the *starboard* or right hand side of the vessel, she is said to be on the *starboard tack;* when the wind is on the *port*, *larboard*, or left side, she is said to be on the *port tack;* and when vessels meet, that which is on the starboard tack either keeps straight or luffs, that which is on the port tack gives way and passes to leeward.

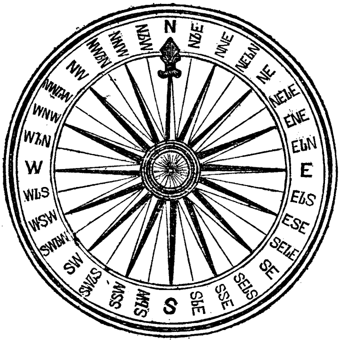
To sail with the wind on the bows the boat must have a keel. In a sail-boat this is generally made movable, sliding up and down, within a well in the centre, and is sometimes called the *sliding-keel*, but more generally the *centre-board.* A skiff may be made to tack by holding the flat blade of a scull deep in the water, against the side of the boat, on the leeward side; but this is inconvenient.

While engaged in learning how to manage a boat it is as well to get an old sailor to teach you how to make the various knots, splices, and hitches for which you will have constant occasion.

Having informed the young sailor of what is necessary to be done on board, we will now impress on his mind a few useful nautical terms and maxims, which may lead to the preservation of life and limb.

OF THE MARINER'S COMPASS.

The ancients, whose only guides over the trackless waters were the heavenly bodies, so often obscured by clouds, could not venture far from shore. It is the compass which has enabled us to steer boldly across the deep. The directive power of the loadstone has been long known to the Chinese, and it was brought over to Europe about the year 1260. The communication of the magnetic power to steel and suspending it on a pivot, is undoubtedly a European invention. The compass is composed of a magnetic needle suspended freely on a pivot, and supporting a card marked with the thirty-two points of direction into which the horizon is divided, and which are thence called the points of the compass. The needle always points nearly north, and the direction of the boat may be easily seen by looking at the card. The whole apparatus on board a ship is enclosed in a box with a glass cover, to allow the card to be seen without being disturbed by the wind. This box is also sometimes suspended, to prevent the needle being affected by the motion of the vessel. The whole is then placed at the binnacle, in sight of the helmsman. In the inside of that part of the compass-box which is directly in a line with the bow, is a clear black stroke, called the lubber line, which the helmsman uses to keep his course; that is, he must always keep the point of the card which indicates her course pointing at the lubber line. Every young yachtsman must learn to box the compass: that is, to repeat all its points in order.



CAUTIONS AND DIRECTIONS.

1. Never leave any thing in the gangway, and keep the decks clear.

2. Coil up all ropes; and have a place for every thing, and every thing in its place.

3. Take care that in tacking or jibing the boom does not knock you overboard.

4. Stand clear of ropes' ends and blocks flying about, when you are tacking, and the sails shaking.

5. Keep a good look-out ahead, and also for squalls, which may generally be observed to windward.

6. Always obey the orders of the steersman promptly.

7. Keep all your standing rigging taut.

8. When the boat is on the wind, sit on the weather side.

9. Should the boat capsize, keep yourself clear of the rigging and swim ashore.

The young yachtsman should on no account attempt to take command of a boat till he is thoroughly experienced, and should never go in one without having at least one experienced hand on board; he should always have his eyes open to what is going on, and be ever ready to lend assistance with the greatest promptitude.

NAUTICAL TERMS.

We shall now give a few of the most common nautical terms, by which the gear and different parts of a vessel are known. For the most part, we shall speak generally, but when we speak particularly of a rope or sail, and the vessel is not named, the reader must apply our remarks to the cutter, as the vessel best adapted for a yacht.

Haul, to pull.

Taut, tight.

Starboard, to the right.

Larboard, to the left.

Close-hauled; or, on the wind; or, flying to windward, steering close to the wind. Cutters have good way within five points of the wind; square-rigged vessels not within six.

Wind on the beam; or, *sailing free*, sailing with the wind across the waist of the vessel; her head is then eight points from the wind.

Before the wind, sailing with the wind right aft, or behind you, that is, with the head sixteen points from the wind.

Sailing with the wind abaft the beam, sailing with the head of the vessel more than eight points from the wind, but not sixteen.

Sailing with the wind before the beam, with the vessel's head less than eight points from the wind, but not close-hauled.

Luff, keep nearer the wind; keep your luff, means, keep close to the wind.

Belay, make fast.

Steady, keep the helm amidships.

Haul aft, more towards the stern.

Put the helm down, put the helm to leeward.

Put the helm up, bring it to windward.

Leeward, the point *to* which the wind blows.

Windward, the point *from* which the wind blows.

Ship the tiller, fix it in the rudder head.

Unship, means, of course, exactly the reverse of the above.

Jibe, the act of bringing over the sail from one side of the vessel to the other.

Bend the sail, fix it in its proper place.

Bowse the sail well up, pull it strongly into its place.

The throat of the mainsail (*a fore and aft sail*), that part of the sail which is fixed to the peak close to the mast.

The Peak, the stick which is at the top of a fore and aft sail.

The Boom, the stick which is at the bottom of a fore and aft sail.

Head-sails, any sails at the head of a vessel; in cutters, foresail, forestaysail, jib, and any others she may carry before the mast, except a square-sail, which is sometimes used for running before the wind.

Fore and aft sails, such sails as the mainsail of a cutter when stretched fore and aft, by its sheets. (See description of cutter and engraving.)

Sheets, the ropes by which the lower sails are made fast in the position desired; we say, for instance, "Haul taut the foresheet," which means, tighten the foresheet. Each sheet is distinguished by the name of the sail to which it is attached; for instance, the mainsheet means the sheet belonging to the mainsail; in like manner, jibsheet, foresheet, &c. The jib, however, has two sheets, one on each side of the forestay, for the convenience of tacking; the foresail has but one, which is made fast to the traveller of the foresheet horse; as the boat tacks, the traveller enables the foresail to pass from one side of the boat to the other.

Foresheet horse, a bar of iron which crosses from one gunwale to the other, to which the foresheet is fastened by means of a traveller; it is an inch or two above the deck.

Traveller, in the case of the foresheet horse, is the ring that passes backward and forward along the foresheet horse, as the foresail is jibed from one side to the other. Speaking generally, the term means an easy ring attached to a sail, and running upon a boom bowsprit or mast, to enable you to haul out or haul up a sail.

Yards, the sticks by which square-sails are set.

Square-sails, such sails as the main-topsail of a brig. (See description of a brig and engraving.)

Tack, to turn a vessel from one side to the other, with her head toward the wind. When a vessel is obliged to tack several times to get to windward, we say she is beating to windward; when she is tacking to get up or down a channel, we say she is beating up or down;—by the by, in rough weather she often gets a beating in the attempt; when tacking to get off a lee shore, we say she is clawing off.

Halliards, the rope by which signals or sails are hoisted. We say, for instance, "haul taut the peak halliards," which is an order to hoist the peak of the sail well up.

Lee runner and tackle, a substitute for a backstay; used in cutters, on account of its being easily removed when going before the wind.

Stays: in tacking, the vessel is said to be in stays from the time the jibsheet is let fly until the foresail draws.

Bobstay, the rope fixed at the end of the bowsprit, and fastened about half way down the stern. Chains are frequently used for this purpose.

Backstays, forestays, etc., etc.: each of these denote the particular part the rope supports. The former are ropes from the after part of the head of the top-mast of a cutter-rigged vessel to the after part of the chains on each side of the ship; the latter is a rope from the topmast-head to the farther part of the bowsprit; it there passes through a block and comes in by the stern-head, and is then made fast to its cleat.

Cleat, a projecting piece of wood or iron, to which sheets or halliards are made fast.

Shrouds are also supports to the masts. Each shroud is distinguished by the part it is intended to support—for instance, the bowsprit and main-shrouds.

The main-shrouds are the ropes fastened at the end of the bowsprit, and extending to each side of the bows.

Boom-guy, a small tackle, one end of which is hooked to the main-boom, and the other forward, to prevent the boom from swinging.

Topping-lift, strong ropes, which are near the end of the main-boom, and led through blocks on each side of the mast, just under the cross-trees, from whence it descends about half way, and is connected with the gunwale or deck by a tackle.

Bow-line, a rope made fast to the foremost shroud, and passed through a thimble in the after lurch of the fore-sail, then round the shroud again, and round the sheet.

Thimble, a small ring, of iron or brass, inserted into the sails.

Cringles, short loops of rope, with a thimble inside them, and spliced to the lurch of the sail.

Gaskets, ropes made by plaiting rope-yarns.

Slack: take in the slack; draw in the loose rope.

Lanyard, a small rope.

Reef: taking in a reef, is tying in a portion of the sail.

Reef-tackle, a small tackle formed by two hook-blocks, one of which is hooked to the under part of the boom, about one-third of its length from the mast; and the other, farther aft. The fall is belayed to a cleat under the boom.

Earing, a short rope used in reefing, one end of which is made fast to the boom, at the same distance from the mast as the cringle, to which it belongs; it ascends and passes through the cringle, then descends and passes through a sheave on the side of the boom; then it is passed on board and stopped to the boom by means of its lanyard, or small line spliced into its end for the purpose; this lanyard is also to make it fast when the sail is reefed and the tackle removed.

Bowsprit fid, a bolt of iron that passes through the bowsprit bits and the heel of the bowsprit, to keep the bowsprit in its place.

Bowsprit bits, two stout pieces of wood, between which the bowsprit passes. If the reader has noticed the way a carriage-pole is fixed, he will readily conceive how the bowsprit is fastened between the bits.

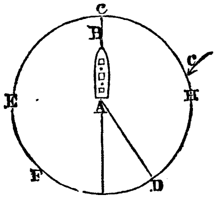
Channels, the places on the side of the vessel to which the shrouds are fastened.

The quarter of a vessel, is the place on either side at which the side and the stem meet.

Midships, midway between the sides of the vessel.

Abeam, at right angles with the keel of the vessel. The term has risen from the beams of the vessel lying that way.

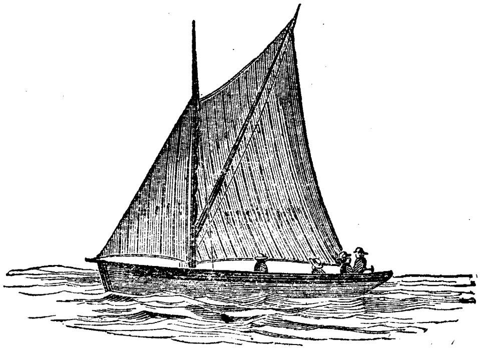
Cast her: in first making sail, it means placing the head of the vessel in the most advantageous position.



Wear, to; to come round on the other side of the wind, without backing. Let A B be the vessel, G the direction of the wind; A B is sailing in the direction B C, and wants to change her course to A D; if she tacks, she traverses the direction C H D; if she wears, she goes off from the wind in the direction C E D.

Helm's-a-lee, the call of the helmsman when his helm is hard down in tacking.

Ready about, a command for all hands to be ready in tacking.



HORSEMANSHIP.

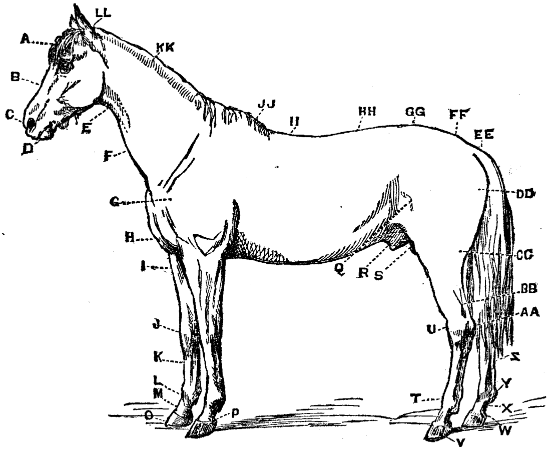
RIDING.

AMONG the possessions which the boyish imagination pictures as treasures of price, a horse or a pony, if it be even the smallest *sheltie* that ever wore a shaggy mane hanging over his brows, will always hold a foremost place. What boy, who has ever been the master of a pony, does not remember the triumphant pleasure he felt on the day when his proprietorship began? How he rejoiced in his new acquisition!

Now, what we want to do in the following pages is, to give our young readers such information about that noble animal, the horse, as shall make them appreciate him more than ever, from a knowledge of his real qualities and usefulness; and we want, moreover, to enable them not merely to admire the horse with an ignorant wonder, because he is beautiful to look at, but *because they all know about him;* besides, no boy who does not know how to manage a horse, and what to do in case of accident or emergency, should ride one. He only who can trust in his own knowledge and resources can really be called independent. Any one of our young readers may at any time be taught, by practical experience, that knowledge is power, and ignorance weakness; and, therefore, before boy of ours was intrusted with a pony, we should take good care that he knew something of the parts, qualities, and character of the horse, and that the new acquisition would not suffer in his hands.

The parts of the horse will be understood by a reference to the cut and explanation on the following page.

TERMS USED BY HORSEMEN.



A. Forehead.
B. Face.
C. Muzzle.
D. Jowl.
E. Gullet.
F. Windpipe.
G. Point of the shoulder.
H. Breast, or bosom.
I. Arm.
J. Knee.
K. Cannon.
L. Large pastern.
M. Small pastern.
O. Hoof.
P. Heel.
Q. Flank.
R. Sheath.
S. Stifles.
T. Coronet.
U. Hock.
V. Hoof.
W. Small pastern.
X. Large pastern
Y. Fetlock.
Z. Cannon.
AA. Point of hock, or ham.
BB. Hamstring.
CC. Thigh, or gaskin.
DD. Quarter.
EE. Dock.
FF. Croup.
GG. Hip.
HH. Loins.
II. Back.
JJ. Withers.
KK. Crest.
LL. Poll.

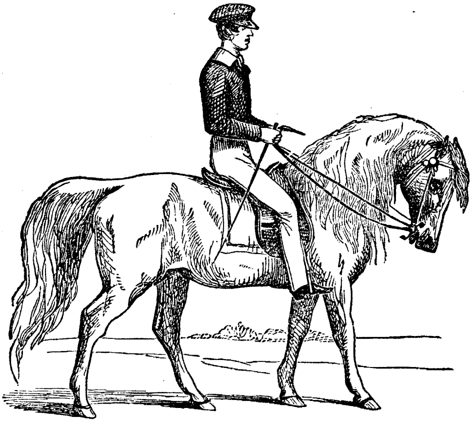
The left side of a horse is called the "*near side*," and the right, the "*off side*." We now come to

THE MARKS OF AGE IN THE HORSE.

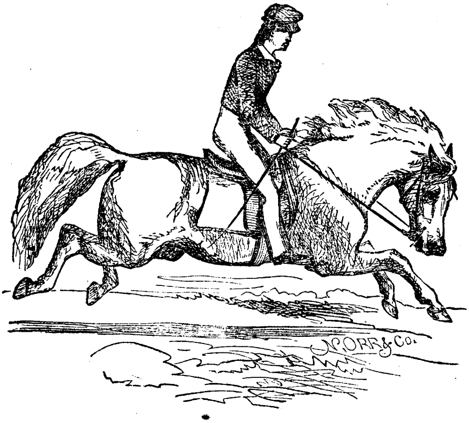
By means of the gradual wearing down of the front teeth, or nippers, the age of the horse may be known. Each of the nippers has a hollow in its upper surface, which is very deep and black when the tooth first rises above the gum, and is gradually effaced by the friction caused by the cropping of the grass, or by biting at the manger, or other kinds of rubbing; but as these vary a great deal according to circumstances, so the precise degree of wearing away will also be liable to fluctuations; and the rules laid down only approximate to the truth, without positive accuracy as to a few months. There are also two sets of teeth; a milk set, which first rise, beginning at once after birth, and a permanent set, which replace the milk teeth as they fall out. The milk teeth come up two at a time, but all are up by the end of the first year. The permanent teeth, also, make their appearance by twos, the first pair showing themselves in the place of the two middle milk teeth in the third year, and being generally level with the other milk teeth by the end of the fourth year, by which time the next pair have fallen out, and the permanent teeth have shown themselves in their places. At five years of age the horse has lost all his nippers, and his corner permanent teeth have nearly completed their growth. The tusks are also above the gums. The centre nippers are now much worn, and the next are becoming slightly so. At six years old the "mark" in the centre nippers is quite gone; at seven years of age this disappears from the next pair, and at eight from the corner nippers; after which, none but a professed judge is likely to make out the age of the horse by an inspection of his mouth; and, indeed, at all times the tyro is liable to be deceived by the frauds of the low horse-dealer, who cuts off the top of the teeth, and then scoops out a hollow with a gouge; after which a hot iron gives the black surface which in the natural state is presented to the eye. This trick is called "bishoping."

THE PACES OF THE HORSE.

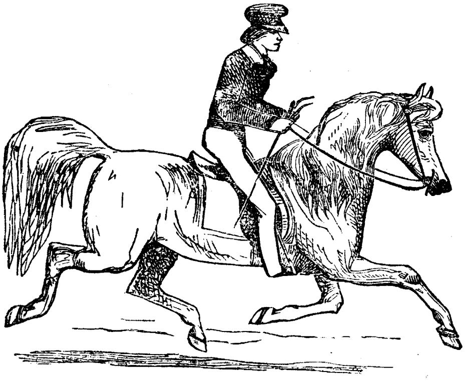
The natural paces of the horse are the walk and the gallop; to them are added by man the trot and the canter, and sometimes the amble and the run. In the walk, each leg is taken up and put down separately, one after the other, the print of the hind foot in good walkers generally extending a



few inches beyond that of the fore foot; but in ponies this is not often seen, and generally the short, quick walk shown in the foregoing sketch, is the pace of that little animal. The order in which the feet touch the ground is as follows: 1st, the right fore foot; 2d, the left hind foot; 3d, the left fore foot; 4th, the right hind foot.



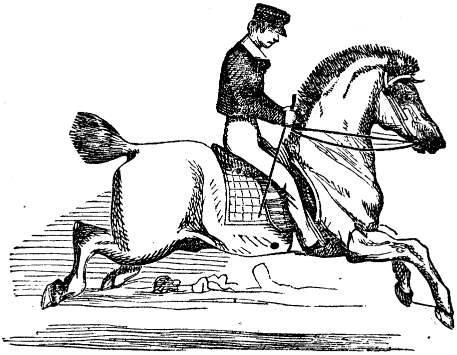
The gallop consists of a succession of leaps, during a great part of which all the feet are off the ground. As the feet come to the ground they strike it in regular succession; but the exact order will depend upon the lead, which may be either with the left or right fore leg. When the lead is with the right fore leg, the right hind foot comes down first, then the right fore



foot and left hind leg, and lastly, the left fore foot. In the trot, two legs of opposite sides are moved exactly together, and touch the ground at the same moment; whilst in the amble the two legs of *each side* move together, and the horse is supported for the instant upon the half of his usual and regular foundation. To counteract this deficiency in the centre of gravity, the body is balanced from side to side in a waddling manner.

VARIETIES OF THE HORSE SUITABLE FOR BOYS.

Besides the several kinds of horses suitable for grown people, those for boys are the galloway, the cob, and the pony. The first of these may be considered either a small horse or a large pony, and is usually about fourteen hands high; and though strong and capable of carrying weight, yet of a moderately light and active make. He is so called from the district where he was originally bred in large numbers. The cob is a thick and very strong pony, or galloway, frequently made to look still more so by cutting his tail and mane short, called "hogging" them, as in the above cut.



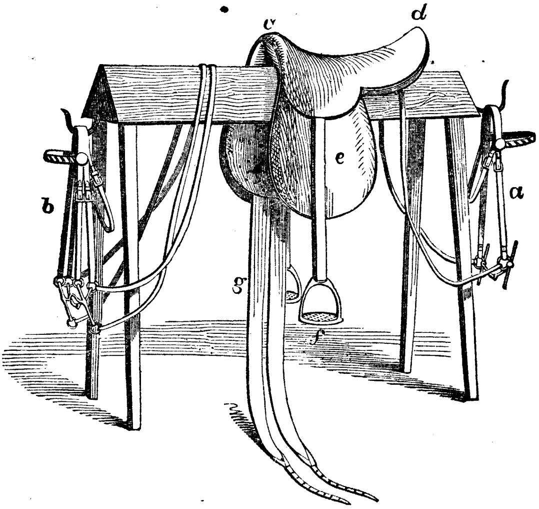
Many ponies are now bred almost of pure Arabian blood, and they are well suited for lads who have mastered the early difficulties connected with keeping the seat under all ordinary circumstances; but as they are generally very high spirited, they are scarcely suited for the beginner, and he had better content himself with an animal of more plebeian pedigree and sluggish temperament.

FORM OF THE HORSE.

It is a common observation of the horseman that the horse can go in all forms; and this is borne out by the fact that he does occasionally do so; but nevertheless, it is well known, that among a large number it will be found that those whose form is most in accordance with the shape considered the best by good judges, will turn out the best movers. In technical language, the horse whose "points" are the best will be the best horse. These points are considered to be: a neat head, well set on a lean, wiry neck, the latter with a very gentle curve, whose convexity looks upward (the opposite form to this makes the "ewe neck"); moderately high withers; a sloping shoulder, wide in the blade, which should be well furnished with muscles; strong, muscular loins; a croup not too straight nor too drooping, with the tail set on with an elegant sweep; ribs well rounded, and carried back near to the hips, so as to make the horse what is called "well ribbed;" circumference or girth of good dimensions, indicating plenty of "bellows' room;" thighs and arms muscular; hocks and knees bony and large, without being diseased; cannon bones large and flat, with the suspensory ligament and tendon large, strong, and clearly defined; fetlock joints strong, but not round and inflamed. The eye should be full, clear, and free from specks; and the ears should be moderately small and erect; the feet should be round, and not contracted at the heels, with a well-formed frog.

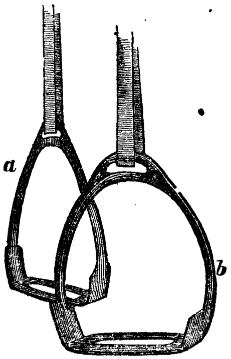
THE ACCOUTREMENTS AND AIDS

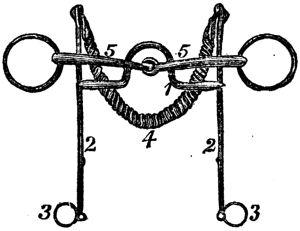
Required by the young amateur, are either a pad or a saddle, according to his age, together with a bridle and a whip or stick. Spurs are seldom desirable for any but the accomplished rider, as they are apt to irritate the pony if not used with discretion, and it is rather difficult to put an old head



upon young shoulders. If the learner is very young, a pad which is made without any tree affords a better hold for the knees than a regular saddle, and will also enable him to ride without stirrups, which feat he will hardly manage on an ordinary smooth saddle. The foregoing illustration will give our young friends a good idea of the saddle and bridle. *a* is a single bridle or snaffle; *b* is a double bridle, or curb and snaffle combined.

The saddle consists of a pig-skin, strained and stretched over a wooden tree raised in the front at the pommel (*c*); and behind, also, is a long ridge called the cantel (*d*), between which is the seat. The sides are made up by the flaps (*e*). Attached to the tree above, and lying *on* the flap, is the stirrup leather supporting the stirrup (*f*). Underneath the flap is a false and padded flap, on which lie the girths (*g*), which are buckled to leather straps, fastened to the tree above. The stirrups are of the annexed form, but are often, for boys, made much lighter, which, however, is a mistake, as the foot is much more easily thrown out of a light stirrup than from a heavy one. They ought always to be used with strong stirrup leathers, and these should be attached to the saddle by spring-bars, which release the stirrups in case of the leg being entangled in them after a fall. The groom should always remove the leathers after the ride, and replace them on the opposite side of the saddle, by which means their tendency to hang, as shown at *a*, is rectified, and they assume the position indicated by the one marked *b*, both representing the left or near side.

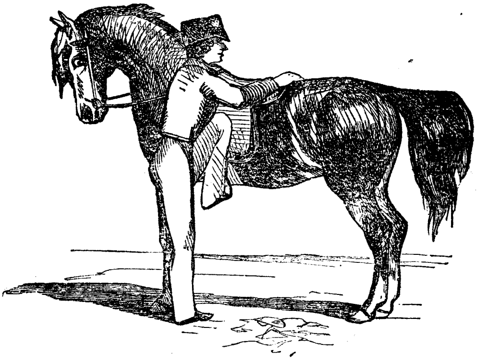




The bridle is either a single or a double reined one, according to the mouth of the pony ridden. A single-reined bridle is usually a snaffle, it being very improper to allow any one to ride with a curb alone, unless he has very steady and light hands. The snaffle bit is merely a jointed bar of iron (5 5) in the accompanying sketch, but when used alone it has a light cross-bar, as well as the ring there shown, in order to prevent the bit being pulled through the mouth. This, however, in the double-reined bridle is omitted, since it would interfere with the action of the curb. Snaffles are either smooth or twisted, and are made of all sizes, the smallest being only adapted for occasional use, and not for the hands of the learner, who should have a large smooth one. The curb-bit consists of three parts: the mouth-piece (1), which usually has a bend in it called the port, for the purpose of pressing against the roof of the mouth; secondly, of the cheek-piece (2), which has a ring (3) at the lower end for the attachment of the rein, and another at the upper end for the head-piece of the bridle; and thirdly, the curb-chain (4). This chain is pressed against the outside of the lower jaw by the upper arm of the curb used as a lever, and it should be hooked up sufficiently tight to act upon it by pulling the rein, whilst at the same time it should be loose enough to prevent its fretting the jaw. This delicacy of adjustment requires some little practice, and the young rider should always ask his teacher to show him the proper mode of applying the curb-chain. Sometimes a martingale is needed, in order to keep the pony's head down, but generally the young rider is better without it, if he will keep his hands well down, and avoid all jerking of the mouth.

MOUNTING.

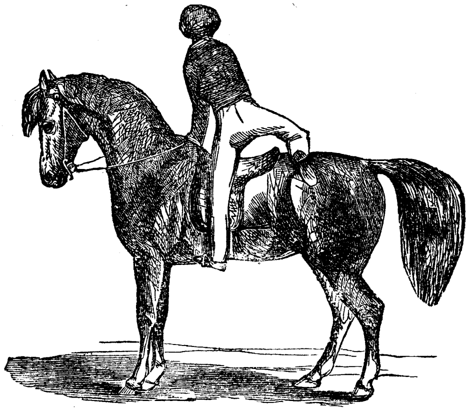
The rider, even at the earliest age, should at first examine the girths and the bridle, and see if they are properly adjusted; for though when leaving home he may be able to depend upon a steady and experienced groom, yet after putting up at strange stables, he is liable to be led into an accident by careless servants, and therefore it is better to get into the habit of always inspecting these essentials to safety and comfort. If there is an attendant groom, he brings the pony up to the place where the expectant rider is standing, and then holds him there, keeping in front of him with a rein in each hand, or, if the animal is fidgety, laying hold of both reins with the left hand, and then pressing him toward the rider by the right. The next thing to be done is for the rider to stand at the shoulder of the pony with his left side toward that part. He then lays hold of the reins with his left hand, drawing them



up so short as to feel the mouth, and at the same time twisting a lock of the mane in his fingers so as to steady the hand. Next, the left foot is placed in the stirrup, when the attitude is presented, exactly as shown in the preceding page. At this moment a spring is given from the right foot, the right hand reaches the cantel of the saddle, and the body is raised till the right leg is brought up to the level of the left, when the slightest imaginable pause is made, and then the right leg is thrown over the back of the pony, while the right hand leaves its hold, and the body falls into its position in the centre of the saddle; after which, the right foot has only to be placed in the stirrup to complete the act of mounting.

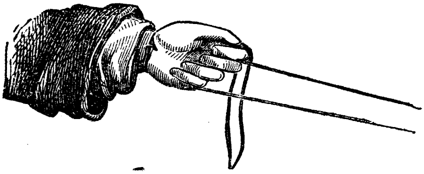
DISMOUNTING

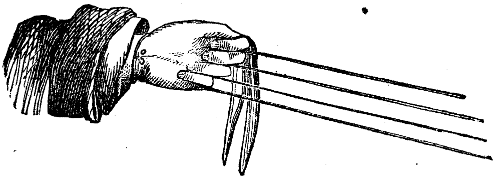
Is exactly the reverse of the last process, and requires, first, the reins to be shortened and held in the left hand with a lock of the mane; secondly, the right leg is taken out of the stirrup, and is thrown over the back of the horse until it is brought down to the level of the other leg. After this, if the pony is of a small size, suitable to that of the rider, the body is gently lowered to the ground, and the left leg is liberated from the stirrup; but if the horse is too high for this, the foot is taken out of the stirrup by raising the body by means of the hands on the pommel and cantel of the saddle, and then the body is lowered to the ground by their assistance.



THE MANAGEMENT OF THE REINS

Is of great importance to the comfort of the rider, and also to his appearance, for unless they are held properly, the body is sure to be awkwardly balanced. When the single rein is used, the best position is to place the middle, ring, and little fingers between the two reins, and then to turn both over the fore-finger, where they are tightly held by the thumb. In all cases the thumb ought to point toward the horse's ears, by which the elbow is sure to be kept in its place close to the side, and a good command of the reins is insured. If a double-reined bridle is employed, the middle finger separates the two snaffle reins, and the little one those attached to the curb, all being turned over the fore-finger, and firmly held by the thumb. In both cases the ends of the reins are turned over the left, or near side of the pony's shoulder. When it is intended to turn the horse to the left, it is only necessary to raise the thumb toward the chest of the rider; and, on the contrary, when the desire is to turn him to the right, the little finger is turned downward and backward toward the fork. In many well-broken ponies the mere moving of the whole hand to the right or left is sufficient, which, by pressing the reins against the neck, indicates the wish of the rider, and is promptly responded to by the handy pony. This action, however, is objected to by some good horsemen, though, in our opinion, most erroneously, as it is capable of being made highly effective in practice.





THE SEAT

Should always be square to the front, without either shoulder being in advance; the loins moderately arched inward, without stiffness; the elbows close to the side, but held easily; the knees placed upon the padded part of the flap *in front* of the stirrup leathers; toes turned *very* slightly outward, and the foot resting on the stirrup, the inside of which should be opposite the ball of the great toe, and the outside corresponding with the little toe. The heel should be well lowered, as far as possible beneath the level of the toe, which gives a firm seat. But the great point is to obtain a good grasp of the saddle by the knees, which should be always ready to lay hold like a vice, without however constantly tiring the muscles by such an effort. The left hand is now to be held very slightly above the pommel of the saddle, and the right easily by the side of it, with the whip held in a slanting position, as at page 107, in which, however, both hands are much too high above the withers. In order to show the effect of an incorrect mode of holding the reins, the rider has only to place his hand with the knuckles in a horizontal position, and the elbow is sure to be turned out in a most awkward manner.

THE CONTROL OF THE HORSE

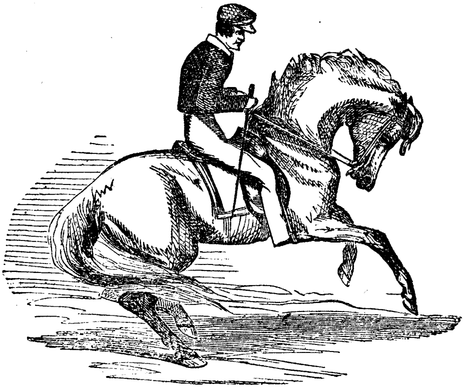
Is effected by the reins, heels, voice, and whip, variously used according to his disposition and temper. Some require only the most gentle usage, which, in fact, is almost always the most efficacious, especially by young people, for whom the horse and dog seem to have an especial affection, and to be always more ready to obey them than might be expected, when their want of strength to enforce their wishes is considered. The young rider will therefore generally find it to his own interest, as well as that of the noble animal he bestrides, to use his whip and heel as little as possible, and to effect his object solely by his voice and the gentlest pressure of the bit. In this way the most high-couraged horses are kept in order by young lads in the racing stables, and the amateur will do well to follow their example. It is astonishing how fond horses and dogs are of being talked to by their juvenile riders, and it is right to gratify their love of society by so doing on all occasions. The reins serve, as already explained, to turn to the right or left, or by drawing tight to stop the horse, and, on the contrary, by relaxing them to cause him to proceed, aided if necessary by the voice, heel, or whip. When it is desired that the right leg should lead in the canter or gallop, the left rein is pulled, and the left leg pressed against the flank, by which means the body of the pony is made to present the right side obliquely forward, and by consequence the right leg leads off. On the other hand, if it is wished to lead with the left leg, or to change from the right, the right rein is pulled, the right leg pressed to the side, and then the left shoulder looks forward and the left leg leads off.

MANAGEMENT OF THE WALK.

When it is wished to make the pony walk, he must be quieted down, by soothing him with the voice if he has been excited by the gallop or trot; and then by sitting very quietly in the saddle, and loosing the reins as much as will allow the head to nod in unison with the action of the body and legs, the walk is generally at once fallen into, and there is no farther difficulty except to prevent a stumble. A tight rein is not desirable in this pace, since it prevents that liberty of action which is required, and leads to a short walk, or very often a jog-trot; and yet there should be such a gentle hold, or preparation for a hold rather, as will suffice to check the mouth in case of a mistake. This is a very difficult art to acquire, and is only learned by long practice; but as few ponies fall at this pace, great liberty may generally be allowed to their mouths. Beside this, little is necessary, more than to sit steadily, *but not stiffly,* in the saddle, and not to sway about more than is sufficient to avoid the appearance of having swallowed a poker.

THE TROT AND CANTER

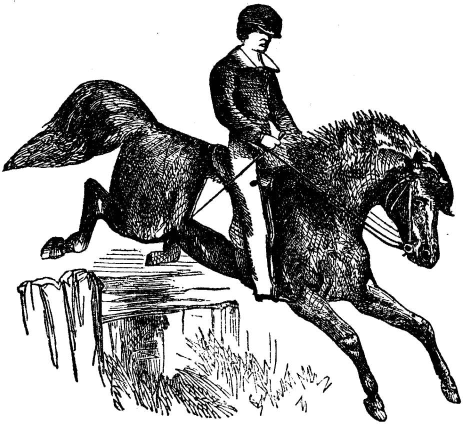
Are effected by rather different methods, but both require a very steady hand, and a quiet treatment. In order to cause the pony to trot, the reins are taken rather short in the hand, and the mouth is held somewhat firmly, but taking great care not to jerk it. The animal is then slightly stimulated by the voice, and the body, if necessary, rises from the saddle, as in the trot, so as to indicate what is wanted. This seldom fails to effect the purpose, and the horse at once breaks into a trot; or, if very irritable, he may be compelled to do so by laying hold of an ear and twisting it, to avoid which he drops his head, and trots as a natural consequence. The canter is also an acquired pace, and for its due performance a curb-bridle is required. In order to make the pony begin this pace, the left rein is pulled, and the rider's left leg pressed against the side, by which the horse's right leg is made to lead off, this being the most usual, and certainly the most comfortable, "lead" for the rider. The hands must make a very gentle and steady pull on the curb-rein, and the body generally must be very quiet in the saddle, whilst, at the same time, a very gentle stimulus is given by the voice, which must be repeated at short intervals, or the canter will be changed to a trot or walk, both of which are preferred to it by most ponies and horses.



Young riders should avoid cantering long upon one leg, as it leads to inflammation of the joints, and they should either change the lead, or alter the pace to a trot or walk.

THE MANAGEMENT OF THE GALLOP

Requires little instruction, practice being the main agent in effecting a good seat during this pace. The seat is either close to the saddle, with the body inclining backwards (p. 109), or standing in the stirrups, in which position the knees and calves only touch the saddle, and the body is bent forward over the withers (p. 108). It should be the endeavor of the rider, while he bends his shoulders forward, to throw his loins well back, so as to avoid straining the horse's fore-quarters, by bearing too much weight upon them. This is done by the hold of the knees on the saddle, and by keeping the feet back; also by rounding the loins backward, and thus throwing the centre of gravity as far as possible behind the stirrup leathers. The object of standing in the stirrups is to save the horse when at his full gallop, as in racing, or in hunting, when he is going over ploughed ground, or up hill. In either of these cases, this attitude allows the horse to exert himself without feeling the weight of the rider to impede his movements more than can be avoided.



LEAPING

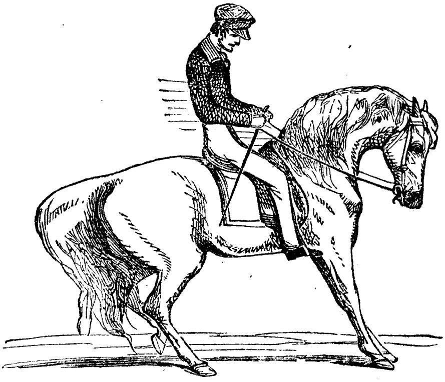
Is only an extra exertion added to the ordinary spring of the gallop, the attitude being exactly the same. It is best learned by beginning with small ditches, which the rider is soon able to clear without difficulty. He may next try very low fences; but the latter, being strong and firmly fixed, are dangerous to the rider, unless the pony is very sure of clearing them. A leaping-bar, if procurable, should always be adopted in preference to either, as a fall over it is not attended with any bad consequences. The groom should place it at the lowest notch, and the pony then may be suffered to clear it at a moderate gallop; after which, if the young rider is able to sit pretty closely, he may be indulged with a higher notch, and gradually it may be raised, until the limits of the pony's powers are reached. In riding at a bar, the learner should lay hold of a snaffle-rein in each hand, taking care to keep them close together, by the right rein being held also in the left hand. The pony is then to be urged to a smart canter or hand-gallop, and held straight to the bar in this way, so that he is obliged to leap; or, if disliking the act, being urged by the whip down the shoulder, or the spur, or the groom's voice and whip behind. Young riders, however, should never be put upon a bad or reluctant leaper, but should be taught upon one which is fond of the amusement. At the moment of rising into the air for the leap, the reins are relaxed, but should not be left quite loose, and the body of the rider inclines forward; while the pony is in the air, the body becomes again upright, and as he descends, it leans well back, until, after a high leap, it almost touches the croup. During this period, the reins should be suffered to remain nearly loose, the hand barely feeling the mouth; but as the pony reaches the ground a stronger hold is taken, in order to guard against a mistake, which might require the aid of the rider to prevent a fall. It is not that he can keep the animal up, but that he checks him, and makes him exert himself in a double degree. There are various kinds of leaping; as the flying leap, the standing leap, the leap in hand, etc. The flying leap is merely one taken at a fast pace, and when the rider can maintain a good seat in the gallop, it is the easiest of all to sit. The standing leap is effected from a state of quiescence, and is much more difficult to sit, because the horse rises and falls more suddenly and abruptly. Between the two is the slow or steady leap, which is only effected safely by the clever hunter or well-broken pony; but when perfect it is almost as smooth as a rocking-horse. This is the mode in which the young rider should be taught to leap. The young rider, when he meets with a gate or other strong fence, which he knows is too much for the powers of his pony, at once gets off and leads him over by the rein; and when well taught, these little creatures will often tilt themselves over high timber, etc., in a marvellously clever manner, so that we have known them in this way obtain a good place in long and severe runs. If, therefore, our readers are allowed to partake in this exciting sport during their summer holidays, they should teach their ponies to leap in hand, or they will be sure to be thrown out.

TREATMENT OF VICES

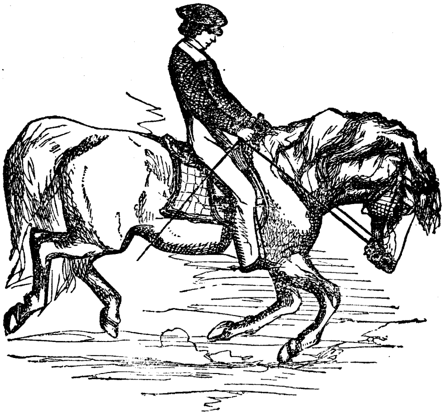
The chief vices which are met with among ponies are—1st. Obstinate stopping; 2d. Stumbling from carelessness; 3d. Rearing; 4th. Kicking; 5th. Shying; and 6th. Running away.

Obstinate stopping, which in its worst forms is called "jibbing," is a very troublesome vice, and even in the saddle is sometimes attended with danger, while in driving it is so to a dreadful degree.

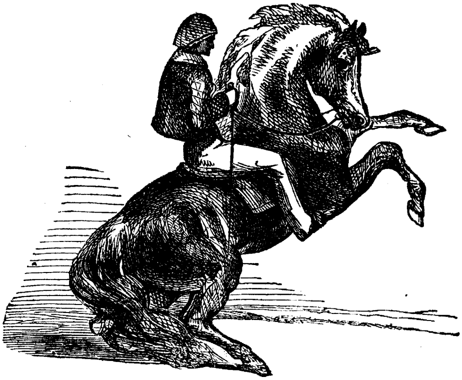
The rider should never attempt to force his pony forward with the whip or spur, which only aggravates the bad-tempered brute; but should patiently sit quiet in the saddle, and keep his temper, until the pony chooses to move forward again. In this way, sometimes, very vicious animals are cured, when they find that their stable is not the sooner reached by their device; on the other hand, if the whip is used, the pony is very apt to lie down, and roll his rider in the dirt, or even sometimes to bolt into a river, or pond, and leave him in danger of his life. Our young friends will therefore remember our advice when, being mounted upon an obstinate pony, and having lost their tempers, they have proceeded to use their whips, and are bemired or half drowned in consequence.



Stumbling is more a defect of conformation than a vice; but, nevertheless, it greatly depends upon a want of spirit to keep up a steady action of the fore legs. It often happens that a pony trots along for a mile or two safely enough; but after going that distance he becomes lazy and careless, and trips with one foot and then with the other, a sure prelude to such a fall as the following, which would be a very bad one (page 120), and sufficient to cut both knees to the bone, and to cause serious damage to the rider. The only way to avoid such accidents is to keep the pony at a steady pace, fast enough to keep him alive, but not enough so as to tire him. Loose stones and broken ground should be avoided, and a careful hold should be kept upon the mouth, without being so tight as to gag it. When a stumble actually takes place, the body should be well thrown back and the mouth forcibly jerked, so as to make the pony exert himself to keep his legs. An unsafe animal of this kind is, however, wholly unfit for young riders, and they should never be allowed to ride one.



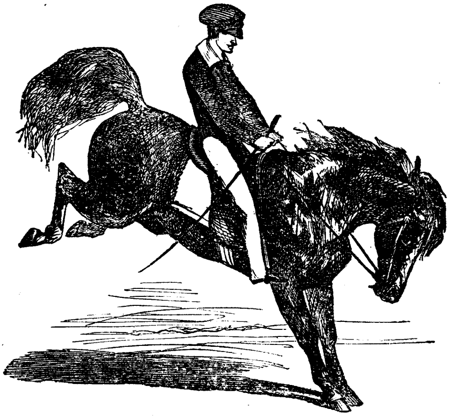
Rearing is a very dangerous vice, and not very common among ponies after they are once broken in. If the rider should, however, be placed upon a rearer, he should be careful to avoid hanging upon the bit when he rises in the air, but on the contrary should loose the reins entirely, and clasp the neck if the pony should rise very high in the air. The



accompanying sketch shows this vice in a very trifling degree, and in such a case the seat thus represented is sufficiently forward to prevent accidents.

The rider will, however, observe that the reins are quite loose. It often happens that this vice is produced by too tight and severe a curb in a tender mouth, and that upon changing the bit, or letting out the curb-chain, the tendency to rise is entirely gone. Whenever, therefore, the young rider finds his pony inclined to rear, let him look well to his bit, and at once drop the curb rein, if he has one. If, however, he has only a snaffle, he may rest assured that it is a regular habit, and he can make up his mind either to battle with it or to change his pony.

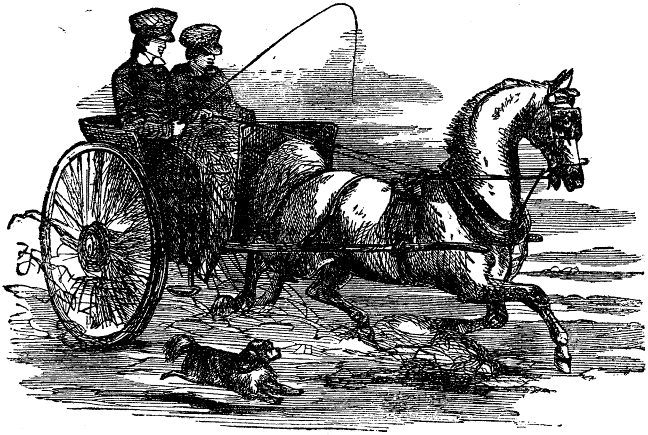
Kicking is much more common among ponies than rearing, and very many of these little animals are given to practise it. It is perhaps partly owing to the teasing of their young masters that it is so common; but whatever the cause, there can be no doubt that it is too prevalent among them. Sometimes it exists as a regular attempt to unhorse the rider, which is a very troublesome habit, and one very difficult to break, because it so often succeeds that the pony is tempted to try again. When this vice is met with, the rider should do all in his power to keep his pony's head up, by jerking the bit, and at the same time he should sit well back, with his feet well forward. When the habit is a very bad one, a cloth or coat may be rolled up and strapped in front of the saddle, by which the rider is aided in keeping his seat; but unless the trick is very violently carried out, he had better trust to his knees in holding on. When kicking is only the result of high spirits and "freshness," the best remedy is a smart gallop, which soon stops all these pranks, and makes the most riotous animal quiet.



Shying is also very common among ponies, and in them is often the result of cunning, which leads them to pretend a greater degree of shyness than they really possess. The best mode of treatment is to take as little notice as possible of the shying, but carefully to make the pony pass the object at which he is looking, without regarding how this is effected. The whip should seldom be used at all, and never *after* the object is passed.

Bolting, or Running Away, is often the result of want of exercise, but sometimes it is a systematic vice, leading to such scenes as the one here represented. A powerful bit and a steady seat, with good hands, are the best means of grappling with this habit, which is sometimes a very dangerous one. If the pony really runs away, the rider should not pull dead at his mouth, but should relax his hold for a short time, and then take a sharp pull, which is often effectual. A good gallop until he is tired will often cure a runaway for the rest of his life. There are a variety of bits intended expressly to counteract this vice; but nothing is perfectly effectual where there is a determination to run away. A nose-band has lately been invented for the purpose, which answers very well. It consists of a long nose-band which crosses behind the jaw and then hooks on to the bit, in the same way as the ordinary curb-chain. When the rein is pulled hard, this nose-band is drawn tight round the jaw, by which the mouth is closed, and the port is pressed strongly against the roof of the mouth, causing a great degree of pain, sufficient to stop most horses. This powerful remedy, which has been named the Bucephalus nose-band, should not lightly be used; but in the case of a runaway horse, or pony, it is a really efficacious one. A similar arrangement, known as the Mexican bit, is sometimes used, and is even better than the one just mentioned.

DRIVING.

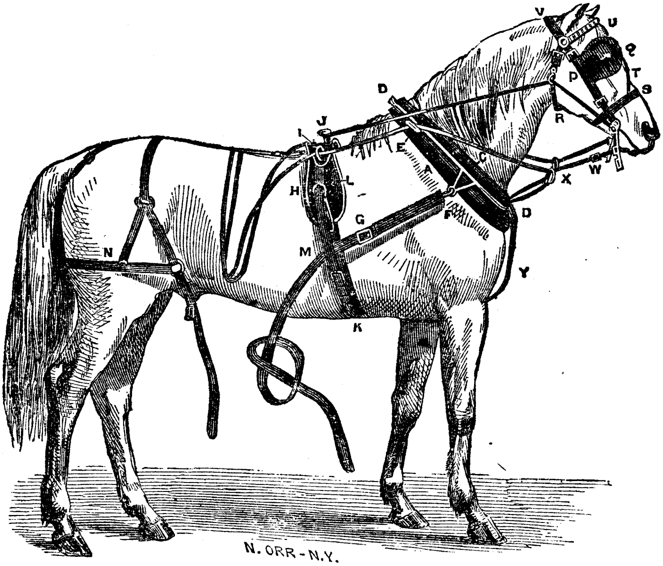


THE usual carriage driven with one horse,—and our young readers should have some experience before they attempt a pair,—is the buggy, or York wagon. In addition to this there are phaetons, gig-phaetons, rockaways, and others, but all have the same harness, and are managed in the same way, so that the directions for one will answer for all the rest.

The horse is attached to a buggy by means of a set of harness. By an examination of the engravings, with the letters of reference attached, our readers will learn the names of the component parts of this, and its adjustment. (See page 124.)

They will see that the harness is divided into, 1st, the driving or guiding part; 2d, the drawing part; and 3d, that for holding up the shafts. The driving part comprises the bridle and reins. The bridle is made up of a front piece (U), a head-piece (V), two cheek-pieces and winkers (P and Q), a nose-band (S), and a throat-lash (R). The cheek-pieces are buckled to the bit, which is generally a strong curb, by means of leather loops, called billets, as also are the driving-reins (W), and the bearing-rein, which is attached to a separate bit, called the bridoon (a plain snaffle), and then is hooked to the pad-hook. This is now very generally dispensed with, but for young drivers it is often desirable, when they have not strength to check the fall of a horse. The drawing parts consist of a padded oval ring fitted to the shoulders, and called the collar (A), sometimes replaced by a padded strap across the chest, called the breast-strap (*b*, Fig.2). On the collar are fastened two iron bars called hames (C), by means of a strap at the top and bottom

(DD), and these hames have a ring in the upper part for the reins to pass through, called the hame teret (E), and nearer the lower part, a strong arm



of iron, covered with a coating of brass, silver, or leather, which receives in its eye the tug of the trace (F). The trace (G) is a long and strong strap of

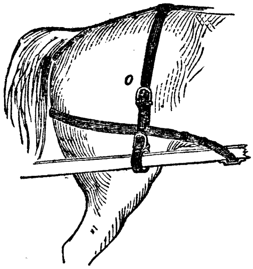


Fig. 1.

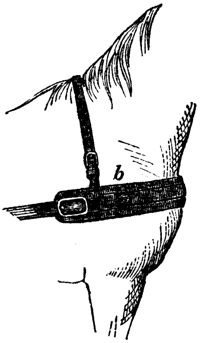


Fig. 2.

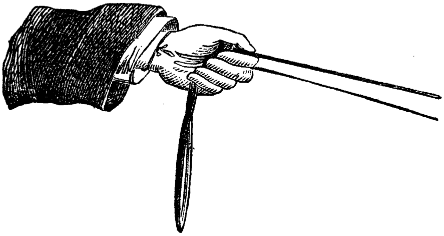
double leather, stitched, which runs from the collar to the drawing bar, and may be lengthened or shortened by a buckle. The supporting and backing part consists of the pad or saddle (H), somewhat similar in principle to the riding saddle, but much narrower and lighter. This has two rings for the reins, called the terets (I), and a hook (J), for the bearing rein, all at the top. It is fastened to the horse by a belly-band (K), and at the back of it there is an eye for the crupper, which is a leather strap from it to the tail, round the root of which it passes, and thus holds the pad from pressing forward. Through the middle of the pad passes a strong leather strap, called the back-band (L), which is attached to a buckle and strong loop on each side, called the shaft-tug (M), by which the shaft is supported and also kept back from pressing upon the horse's quarters, in which latter office it is sometimes assisted by a leather strap passing round these parts, and buckled on each side, either to the shaft or to its tug, and called the breeching (N); a kicking-strap is sometimes substituted for the common breeching, or added to it, as shown at *o* (Fig. 1).

PUTTING TO.

Before driving, it is necessary that the horse or pony should be "put to," which is effected as follows: 1st, slip the shafts through the tugs, or, if there are hooks, drop them down into them; 2d, put the traces on to the drawing-bar, either hooking them on, or else slipping them on to the eyes, and being careful to place the leather stops in these to prevent the trace coming off; 3d, buckle the belly-band sufficiently tight; and 4th, buckle the kicking-strap, or breeching, if either is used. After this, the reins are taken from the terets, where they were previously placed, and the horse is ready.

DIRECTIONS FOR DRIVING.

In driving, the reins are held differently from the mode already described as used in riding, the fore-finger being first placed between them, and then both the reins are grasped by all the other fingers, and the near side rein is also held firmly against the fore-finger by means of the thumb. In this way, on an emergency, the near or left rein may be pulled by itself, by holding it firmly with the thumb, and suffering the other, or off rein, to slip through the fingers, or *vice versa.*



Whilst turning, or when driving a high-couraged horse, and in critical situations generally, the right hand must be at all times called to the assistance of the left; thus, the reins being grasped as before stated, you pass the second and third fingers between them, and loosening your hold on the off rein a little, let the right hand have complete command of its guidance, still, however, firmly holding both reins in your left; this position gives you great power over your horse.

STARTING.

Holding your reins with both hands, start your horse either by your voice or by the reins, gently feeling his mouth, but neither pulling at it nor jerking the reins. Many high-couraged horses have been made balkers by the stupidity of a driver. If a young horse's mouth is hurt by the driver checking him every time he starts, he will be sure to incur some vice; the habit of rearing, or of balking, will most probably be the result. The learner may say, "Supposing, however, he refuses to start, what then is to be done?" We reply, have patience; let the groom lead him off, caress him, speak quietly, and encourage him to proceed, and if he presses on one side, as if he wanted to go round, turn him round, if there be room, and as soon as he has his head the right way, give him his liberty, and by the voice or whip urge him to proceed. Much must here be left to the judgment; a touch with the whip in such circumstances would make some horses jib, while it would immediately start others; some it would be advisable to urge only with the voice, and to have a person to push the buggy on, so that the collar should scarcely touch the shoulder in starting. Supposing there is not room for the horse to turn, and he persist in his attempt to do so, we have always found it best in such a case to desire the groom to let his head alone, and to go to the side toward which the horse is inclined to turn, and then push against the extreme end of the shaft; if he does this, speaking quietly to him all the time, forty-nine horses out of fifty, that are not irreclaimable balkers, will after a short struggle proceed. The sooner you get rid of a confirmed jibber the better: no quality such a brute can possess would repay you for the trouble the vice occasions; which is besides always a dangerous one.

THE ROAD.

Having started your horse, keep your eyes open, looking well before you, not merely for the purpose of avoiding other carriages, but looking up the road, and on each side of it, so as to notice if there be any impediment to your horse's progress; any loose stones which he might tread upon, and thereby be thrown down; any sudden risings or fallings in the road, or any object which might frighten him. Always keep your horse well in hand, that is, feel his mouth; if you do not you are never prepared for emergencies: if he stumbles, you cannot help him to recover his legs; if he starts, you cannot check him. But in keeping him in hand, as it is called, you may still fall into error, for if the horse be very light in the mouth there is a probability that an inexperienced person may so check him, as not only to impede his progress, but to put him out of temper; and as nothing is more difficult for a novice to manage than a very light-mouthed horse, when he once takes it in his head to have his own way, you must be careful merely to feel his mouth so as to have the reins at command, but still not sufficiently tight to check him. This is called driving with a light hand, and indeed is the perfection of driving, when it has become so habitual as to have assumed the character of "a style." Young drivers, in attempting this, will frequently allow their horses to run from one side of the road to the other; or, if their peregrinations do not embrace the whole of the road, they allow their horse (in fact make him) to sidle about in such a manner, that if they were to look at the track of their wheels, they would be astonished at what they had been doing. This must be avoided; as nothing is so ungraceful as to see a carriage yawing from side to side. A little thought will, moreover, convince you how much unnecessary ground you have gone over by this practice. Holding in hand sometimes produces another bad practice, particularly if your horse's mouth is not delicate; it gets him into the habit of hanging in your arms, and boring continually upon the bit, until his mouth becomes so callous, that if he stumbles he must come down, unless you can hold him up by main strength—a feat only to be achieved by a young Hercules. This may be avoided sometimes by keeping the bit moving in his mouth, but more frequently by not unnecessarily pulling at the rein; many a horse has become an arrant bore from this practice. If the reins are held with both hands, as before directed, you will have much more command of them, and a little attention will prevent these inconveniences.

But the tyro may perhaps say, "But if my horse will hang in my arms, what am I to do then?" The best plan to adopt is the following. We will premise, that whenever your horse has a vice or a fault, you should consider what originated it; and this being discovered, a remedy will very frequently be found. In the case in question, the fault is often produced by bad driving, and often from the horse never having been properly bitted; in either case the advice we are about to give will generally be useful, particularly if the horse be properly driven when he is put in harness. When the horse is in his stable, let him, for three or four hours a day, stand with his head fastened to the pillar reins, and with a colt bit in his mouth; with this he will play, by continually rolling it about in his mouth, and straining on the reins; he thus becomes familiarized to the bit, and regards it, if we may so say, as a source of amusement rather than of torture. From being thus accustomed to the bit when he is not in motion, and when boring on it would become painful, he forgets his former habit, and will bear the bit lightly in his mouth when at work. This process is technically termed bitting him, and if persevered in, and the horse be *properly driven*, the evil will most probably be remedied thereby. Sometimes, changing the bit will have a good effect; if he has been used to a port bit, try a snaffle; if he be hard mouthed, and an ordinary snaffle is not of sufficient power, a ring snaffle will generally be effective. When a horse bores to one side of the road, let us strongly advise the young driver never to adopt that unphilosophical and senseless plan of whipping him on the neck upon the side to which he is boring. We grant that the lash drives him over for the moment, that is, if he will bear whipping, but this, continually repeated, has a bad effect on both horse and driver. It either irritates or dispirits the horse, and fatigues both parties; and every one knows that when flogging once commences, a man very soon loses his temper, and from a coachman he is apt to forget himself, and become a brute. Whipping will not remedy the evil; the horse gets more and more weary, and even if he does not become restive, he will soon become knocked up. If the plans just referred to will not cure him; or rather, if he be incurable, part with him, for whoever keeps a horse for comfort and pleasure, will find his object defeated by driving such an animal. Such horses may prove useful in business from some good qualities they may possess; but a horse driven for pleasure should never have a vice that will compel his master to work as hard as a blacksmith. We have been speaking of a horse working alone in a buggy or rockaway. When working in double harness, you can prevent much of the inconvenience by having a check-rein fastened to the other horse's teret; the same remedy holds, in this case, to a horse that is always boring to one side of a road, when working in double harness. Observation will, however, show you that in the one case the check-rein had better be fixed to the trace, in the other to the teret. A few words may here be said as to the cause of a horse's boring to one side. It is frequently the result of weakness, and many a horse will do it as he gets weary, who will not when he starts. Sometimes the mouth is harder upon one side than the other, which will make him flinch from the softer side; a light hand will tend to remedy this; but if he be driven with a port bit, placing the rein which is on the soft side of the mouth right up to the cheek, and the other a bar or two below, will probably prevent any unpleasantness or any danger, particularly if the horse be driven with care. But such a horse is by no means to be desired; if he should stumble, or if, from any circumstance, it is necessary to pull him up sharply, an inexperienced hand may make him jump to one side of the road by not having presence of mind to recollect his fault, and forgetting to pull strongest upon the hard side of the mouth. An experienced hand will feel, as it were intuitively, the exact force which each side of the mouth will bear.

DIFFICULT SITUATIONS FOR YOUNG DRIVERS.

We will now proceed to notice what may be accurately classed under the above denomination.

Tusking the bit, and running away.—Some ill-tempered horses will become violent upon being in any manner put out of their way—such, for instance, as being suddenly stopped two or three times within a short distance, or receiving a sudden cut with the whip; but instead of exhibiting this violence by rearing or kicking, they will seize the bit in their mouths, close against the tusk, and run violently to one side of the road, as if with the intention of landing you in a ditch, or giving you a resting-place in a shop window. Your best mode is to stop them at once by a quiet pull, speaking softly, as if nothing were the matter; and then coax them into good temper until you get home, when we will presently explain to you how to prevent the like again. If this cannot be done, give them the head for a moment (a short one it must be), and after bestowing a violent switch across the ears, snatch the reins suddenly toward the side to which the horse is boring, which will probably, from the surprise, disengage the bit, and enable you almost simultaneously either to pull him up, or draw him away from the danger. You will observe we have said on the side *to which he is pressing*, for it would be all but impossible to draw him to the other; for such a brute always seizes the bit by the branch or side which is next to the place he is running to, knowing, or rather thinking, you will pull the other rein, in which case the side of the face would aid him in resisting your efforts. The remedy for this is a ring bit, for it has no branches for the horse to get hold of, and if he merely seizes that part of the bit which is in his mouth, a sudden jerk will instantly disengage it, that is, if it be done with sufficient decision; but our experience teaches us, that in ninety-nine cases out of a hundred the horse will not attempt this; he misses the branches, and is disappointed and abashed at not being able to play the old trick.

Frequently, however, a horse tusks the bit, as it is called, with the view of bolting; it you cannot disengage the bit in the way directed, you have only to stop him as quickly as you can. Recollect, however, that a continual dead pull will never stop a runaway horse, unless indeed you have the strength of Hercules: his mouth soon becomes callous to the action of the sharpest bit. Nor is it proper to keep jerking a horse under such circumstances, as that would rather urge him to increase his speed. The ordinary mode is to take the reins short in your hands, and then, by a sudden, steady movement of the body backward, exerting at the same time all the strength of the arms, endeavor to pull him up; this, repeated two or three times, will generally be effectual. Suppose it not to succeed, adopt the following plan, by which we have stopped many a determined bolter who had bid defiance to more than one reputed whip. Cross the reins in your hands, that is, place the right rein in the left hand, the left in the right hand, take them very short, and then suddenly put all your strength to them with a sudden jerk, but continue the pressure, violently sawing them at the same time; if this will not bring the horse to his haunches at the first attempt, let him partially have his head—that is, sufficiently slacken your pull to give his mouth time to recover its feeling—and then repeat the effort. We never knew a horse that we could not stop by this method, which, though not very graceful, is very effective.

Stumbling and Slipping.—If your horse be kept well in hand, you will generally be able to keep him from absolutely coming down. You will naturally put more force to your pull upon his making the stumble, and this jerk, if succeeded by a strong, continuous aid, generally keeps him on his legs; a smart stroke with the whip should follow, to remind him that his carelessness is not to be repeated. A horse that is apt to stumble, or even one that from his form is likely to stumble, should not only always be kept well in hand, but also be kept alive, by now and then being reminded, without actually punishing him, that his driver has a whip in his hand. A horse with his head set too forward, that is, low in the withers, is almost sure to come down sooner or later, particularly if his fore legs stand at all under him, as it is technically termed, that is, slanting a little inward. Stumbling, however, be it remembered, is totally distinct from slipping; the stone pavement will give the tyro plenty of opportunity to perceive the difference. If a horse slips, a sudden jerk will probably throw him down; in such a case the driver must aid the horse by a strong, steady hold, letting him, as it were, lean on the bit to help himself to stand. It requires some nerve thus to aid the horse, without being induced to jerk him by the suddenness of the slip.

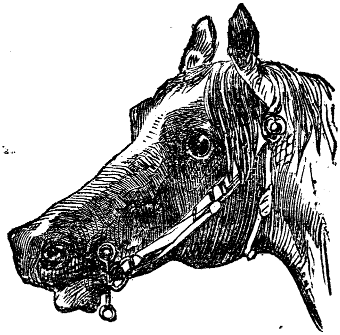
Jibbing, or Balking.—Demosthenes, on being asked what was the soul of oratory, answered, "Action, action, action!" If we are asked what is the best mode to adopt with a jibber, we should say, Patience, patience, patience! This, however, must be qualified by the temper of the horse. Some balkers (*but very few*) may be started by sudden and severe whipping; ninety-nine times out of a hundred it will render a jibber restive, mischievous, or obstinate. Experience only can dictate the management of such animals. Some will start after waiting for a short time, having their head free; coaxing is generally the best means, and, as before said, have patience, and do not be in too great a hurry to start. Some may be started by being turned round, and others by being backed for a short distance. Many think it a good plan to punish a jibber when he is once started; our experience proves the contrary, for, depend upon it, he will recollect this next time, and will not fail further to exercise your patience, for fear of the flogging.

Kicking.—An experienced eye can generally tell if a horse is likely to kick, and also when he is about to kick. We, however, always drive with a kicking-strap, and would recommend the practice. When a horse attempts to kick, you must hold him well in hand, and lay the whip well into him about the ears, rating him at the same time with a loud voice; this plan we have generally found effective. We would, however, recommend the young driver first to try the rating without the whipping; the voice frequently has a wonderful effect upon a horse. Be sure, however, to keep him well in hand.

Rearing.—Little can be done in harness with a determined rearer. When he tries to rear, if you have room give him a half turn, this will make him move his hind legs, and will consequently bring him down; you will find a series of turns punish and surprise him more than any thing else. When you have once got him on the move, with his head the right way, you can punish him with the whip, if he is one that you are sure you can manage;

if not, you had better leave well alone. With respect to rearing in double harness, we will here observe, the best way to act is to push the other horse forward, and soothe the restive one, until you have fairly got him on; you can then punish or not, according to your judgment, but not without reference to your ability to manage the horses.

Shying.—Before a horse starts at any thing on the side of, or lying on the road, he usually gives some notice of his intention, by cocking his ears, and bending his head toward the object. As soon as the driver perceives these signs of uneasiness, he should be upon his guard to prevent a sudden turn round, or flying to one side, which would evidently be dangerous; and not only on this account should he be attentive, but because each time the horse violently shies, the habit is in progress of being confirmed. As soon, therefore, as a horse accustomed to shy gives notice of uneasiness, he should be coaxed up to the object of his terror, so that he may perceive its harmlessness; let him deliberately stand and view it, and if he cannot be got to it, let it, if possible, be brought to him, and then replaced in its former position; thus let him be induced to go up to it by care and kindness before it is passed, and you will generally find that a repetition of this practice will greatly improve, if it do not cure him; but by no means flog or force him up to it—let him take his time. We are now, of course, speaking of a horse whose sight is perfect. Some horses shy from having an imperfect vision; in fact, because they are going blind, and the sight is affected; and we would, therefore, advise a young driver to have his horse's eyes examined (if he is unable to examine them himself), whenever this shying is violent after a few lessons of the nature before detailed. We do not mean to say that there are not horses so timid that they cannot be broken of this bad practice; but we do say that most horses may be, if taken in time, and also that nine out of ten of these animals owe their vice to bad breaking, or bad drivers.

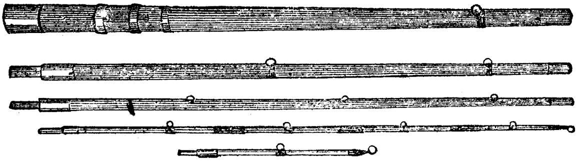


ANGLING.

The art of the angler is varied by circumstances. To be successful, it must be based on a knowledge of the habits of fish—different fishes having different tastes, and even the same kind of fishes differing in habits, when placed in different localities. It is our intention to give general information on the subject, through which a smart boy, by using his eyes and judgment, may become an accomplished angler.

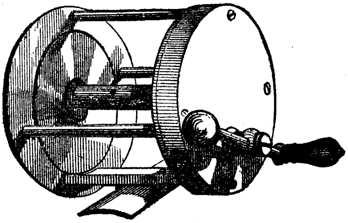
The implements of the angler are as follows:

THE ROD.



For small fish,—chubs, dace, roach, minnows, sunfish, and small white perch,—a black alder or willow rod, about eight feet in length, will answer; but for catching larger fish, a carefully made rod is necessary. Besides, it is more comfortable to have a nice rod. It can be had at the shops where they sell fishing-tackle, in great variety of shape and price. One with four joints or pieces—the butt and two succeeding pieces of ash, and the last joint, or tip, of lancewood—will be the best for ordinary purposes. It should have two tips, one short and one long. The wood should be straight-grained, and each joint should have eyes, through which the line will run easily. A rod of cane, without joints, is exceedingly good, if it can be kept near the fishing-ground, as it is not very portable. Whatever the material, the rod should be straight, tapering from butt to point, tight in the joints, and have a good spring to it.

THE REEL.



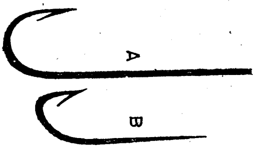
Very good fish have been caught without the reel; but that is a very useful thing, nevertheless, allowing you to let a large fish run out a deal of line, and letting you wind it up at your pleasure, thus affording him play, and making his capture more certain. Without it, you would lose many a large fish, who would snap your taut, short line. The reel is generally made of brass, but sometimes of German silver, and may be either plain or multiplying. The latter is best, but, being complex, is liable to get out of order. The plain imported reel is very good; but if you are able to obtain a multiplying reel, get an American one, as those made in England are very apt to be fitted with brass internal wheels, the cogs of which soon give way. A reel that will hold about fifty yards of line is enough for a boy's purpose.

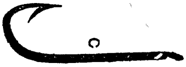
THE LINE.

Different lines are required for different fish. For catching shiners, a stout piece of homespun thread will answer, and with this, and a No. 11 hook, you can capture a half-pound sunfish, or perch, if need be. Sea-grass is also a good material for a short line of, say, twenty feet. For your main line, a plaited silk, or well-twisted hemp, is best, measuring fifty yards. It should be boiled in linseed oil before being used, which will add to its durability, and render it less liable to kink. To catch large pike or muskelunjeh, where you troll for them, you want a stout cotton or hemp line.

THE HOOK.

Your hook has to be proportioned to the kind of fish you catch, and will vary from the little fly hook, No. 12, up to the salmon, No. 0, which is large enough for any fishing a boy will ever get. As to the style, the Limerick (A B) is decidedly our favorite; although, for some fishing, the Kirby (C) is excellent. The Limerick has a curve extending from the shank to the bottom of the bend, which thence turns up at an angle; while the Kirby rises up nearly straight, and its barb has a slight turn outwards.





The sizes of both kinds of hooks are the same.

There is also a pattern called the Virginia hook, which is very popular with Southern fishermen. It is shaped like the Kirby, with a Limerick barb, and is longer in the shank than either.

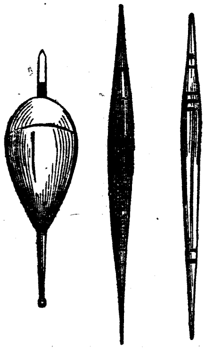
After getting the kind of hook to suit your fancy, test each individual hook, and see that it has a good temper, and that the point is sharp and perfect.

SINKERS, OR DIPSIES.

These are of various sizes, from a small shot, half split, and then closed on the line, to a heavy lead, of a pound or more, used in sea-fishing. A swivel sinker is best, as it prevents the line from being entangled, and, if you troll, aids in spinning the bait.

SWIVELS.

These are very necessary. They are generally made of blued steel, or brass, and should be placed at various parts of the line, one being within a foot or eighteen inches of the bait.



FLOATS.

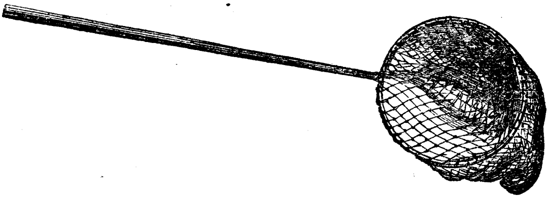
Floats are usually made of corks or quills—sometimes of red cedar or white pine, and are either egg-shaped, or made like two long, narrow cones, joined at their bases. For small fish, the quill-float is preferable; and for very large fish, the red cedar, hollowed out.

LEADERS.

The leaders, to which the hooks are attached, are made either of twisted horse-hair, sea-grass, or silk-worm gut—the latter being the most elegant material, almost imperceptible in water, and necessary in taking shy fish.

NETS.

The only two nets are the landing and bait. Their uses are expressed in their names. The landing-net is a purse-like net, with a three-eighths of an inch mesh, and is made about sixteen inches in diameter and two feet in length, set on a stout brass wire ring, and attached to a light but strong hickory handle, five feet long. The bait-net is similar, but somewhat smaller, and has a quarter of an inch mesh.



GAFF-HOOK.

This is a bent hook, about four inches long, with a six-feet handle, by which you get a purchase in the gills of a big fish, and so land him.

THE CLEARING-RING.

This is a ring weighing from a quarter of a pound to six ounces, which is tied to a stout cord, and when the line is caught in some obstacle under water, is placed around the line, and sent down to clear the way.

BAITS.

The ordinary bait in common fishing is the *angle-worm*, as it is called, which may be dug up in any loamy soil, especially in damp situations, or found by rolling over logs, or lifting plank that have lain for some time on the ground. There are other species of worms sometimes used, such as the *brandling*, which you will find about old dung-heaps, and the *marsh-worm*, which has a broader, flatter tail than the angle-worm.

The white grub-worm, which will be found under old decayed logs, stumps, and in freshly-ploughed ground, is much approved by some, but we never found it of much use.

The grasshopper, used without a sinker, so as to float on the surface, is a killing bait for trout, and the large sunfish, red-eyes, or yellow perch. Sunfish will rise readily, too, at the common black cricket, if it be left floating on the surface.

Minnows, gudgeons, shiners, and dace are all used as bait, and chub for large fish. They must be put on alive.

In baiting with a minnow, do not put the hook through the back, fin, or body, as recommended by most writers. Your bait will die sooner, indeed, will inevitably die. By baiting in the proper manner, your bait will live as long as wanted, and if you do not fancy him, may be released carefully, and sent about his business, none the worse for it. A writer on this subject says:

"Your game-fish takes his prey by swallowing it head foremost, not liking the prickles of the dorsal fin to stick in his belly. So I insert my hook carefully in the gill-cover of my bait, which the little fellow hardly feels, and let him play about, until Mr. Gristes, Mr. Lucioperca, or Mr. Salmo call for his breakfast."

Shad-roe is an excellent bait in its season for striped bass, or rock-fish, trout, and white perch.

In salt or brackish water, the soft or shedder crab, the shrimp, the soft and hard clam, are much used.

Dough, or dough and cheese, mixed with cotton, is capital for many ground-fish.

A frog, either whole or in parts, is capital for pike, pickerel, or pike-perch, in some localities.

Spoon-bait consists of the bowl of a spoon, silvered on the convex, and painted red on the concave side, with one or two hooks fastened at the top end, and set on the line. Drawn quietly through the water, the black bass and pickerel dart at it readily.

In addition to these, there is the artificial fly, the most elegant of all baits for trout and salmon, and a great many others, which a smart boy will find in the woods and about the streams, in the shape of flies and beetles. The three main baits are, however, artificial flies, earth-worms, and small fish. In getting the latter, remember that small fish with stiff, prickly back-fins, such as sticklebacks and sunfish, are of little use, no large fish liking to have his throat lacerated with the sharp spines. Even that voracious fellow, the pike, will hardly venture on a young sunfish, however hungry he may be.

MISCELLANEOUS MATTERS.

Besides the foregoing, you will want a disgorger, to aid you in getting out the hook when swallowed very far; and you should have with you always a little leather case, containing, besides your extra hooks, etc., a pair of small pliers, scissors, some shoemaker's wax in a piece of soft leather, and a piece of stout cord, to be waxed and wrapped around your rod, in case it should break, and you would need to splice it. A fish-basket, and conveniences of that sort, should be provided.

GENERAL DIRECTIONS.

Look out for wind and weather. The south wind, and after that the west, is considered the best by all experienced anglers, from Walton down, and a cloudy, though not a cold day, is set down as favorable. Fish are whimsical, however, or it may be have fits of hunger, for we have had fine fishing on a cold day, with an east wind; and have filled our basket when the sun was beaming down scorchingly and not a cloud in the sky. The best time of day is early in the morning, and late in the afternoon.

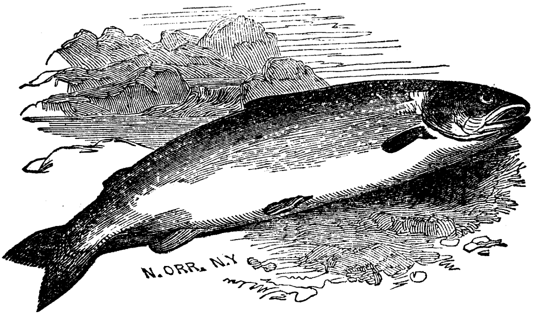
Be cautious. Fish are shy. Never show yourself near where the fish lie, if you can help it. Fish, like the Irishman's gun, was made to shoot round a corner. Many a big trout, or huge black bass, has been captured while he lay hidden under an overhanging bank, by the skilful angler dropping or casting his bait gently in his vicinity. Never let your shadow fall in the water, and if you cannot fish with your face to the sun, take shelter behind a tree, bush, or rock.

Have on good boots and woollen stockings, the former to keep out the water, and the latter, in case it does get in, to let it do you as little mischief as possible. Have plenty of spare hooks and leaders, with an extra float, sinker, and swivel, to make up any unexpected loss, and always be provided with an abundance of bait.

With these remarks, we come to the various kinds of fish to be met with in different parts of the United States.

THE SALMON.

This, the noblest of all fish, is to be found in but a few places in this country. It is confined to the States of Maine, California, and Oregon, and some of the Western lakes. Occasionally a few make their way up the Hudson. The time of taking them is from April to July, and they are treated, like the trout, either to the fly, worms, or minnows. You want a heavy rod, with a very large reel, and from three to six hundred feet of line. A swivel sinker and cedar float are to be used, when you fish with live bait, and your hook is a No. 0, 1, 2, or 3, Limerick, with a strong leader of twisted gut, from three to six feet in length. For fly-fishing, you must use a swivel instead of a swivel sinker, and, of course, no float.



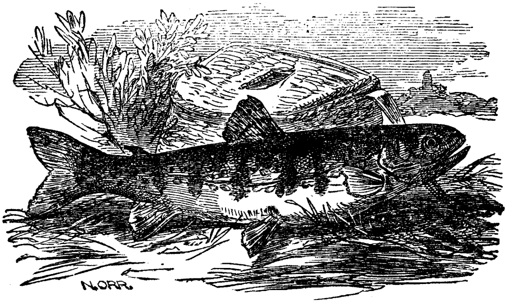
For worm-fishing, put on your worm head first, and leave about a half inch of the tail to wriggle; throw it gently in the current, draw it up quietly after it has floated down, keeping the bait continually in motion. Keep a tight line when he bites, but do not strike too soon. Allow him to gorge, then strike suddenly and sharply. If the bite should be only a sudden jerk, pay no attention to it—it is merely a nibble. Wait patiently, and he will call again. If he does, look sharp. Play him gently but firmly. Let him have line enough as he goes from you, but as he returns reel up. Keep him clear of stumps and rocks; be patient, and as cool as you can. At length he will exhaust himself. Draw him gently to shore, put the hook of your gaff in his gills, and land him.

THE LAKE TROUT.

This is found in a few lakes in the Middle and Northern States, and differs from the Mackinaw trout, with which it is often confounded. It is blackish, with many gray spots, body comparatively short; its back-fin has a sinuous margin, and its length is two to four feet. It is taken in the same way as

THE MACKINAW TROUT.

This fish is dark-gray above, of a light ash-gray, or cream-color, on chin, throat, and belly; the back and sides having many lighter gray, brown, or dirty white spots, which do not show themselves on the fins, as in the lake trout. The breast and belly-fins are yellowish; teeth, gums, and mouth of a purplish tinge; length two to five feet. It has a finer flavor than the lake trout.



BROOK TROUT.

For this fish you want a heavy rod, and spoon-bait or revolver. You troll for him, or you can use the large minnow. Your line must be stout. You manage your fish as in taking any other salmon—for a member of the salmon family he is, and a fine one at that.

COMMON BROOK TROUT.

This fish is too well known to need description. A variety is the

BLACK TROUT,

Which seems to be the same fish, modified by its dwelling-place, which is in muddy streams and ponds principally. Then, there is the

HULBO TROUT,

With a forked tail, dusky back, yellowish belly fin, all the other lines palish purple, and grows from two to four feet long. It is to be taken after the fashion of the lake trout.

The best time for taking the common trout is from April to August, or, if it be mild weather, as early as March. You may capture this fish in one of three ways:—

Top-Angling.—This is done with an artificial or natural fly, grasshopper, cricket, or other small insect to be found near water-courses or ponds. *Middle-Angling* is done with a shiner, minnow, or shrimp; and *Bottom Fishing* with a worm or shad-roe.

Fly fishing is the perfection of fishing, especially with the artificial fly. You use a stout rod, from ten to twelve feet long; your reel has on from thirty to fifty yards of fine silk, grass, or hair line, with a yard long leader, and your fly or flies set on very fine gut. Cast your line with the fly before you, and do it so dexterously that the fly will fall lightly on the water, and as little line with it as possible. This dexterity can only be acquired by practice. Your line should be about half as long again as your rod, though, as you acquire skill, and want to cast at some likely looking hole at a distance, you lengthen it. If you see a fish rise at a natural fly, throw a yard or so above him, so as to let your fly float to him naturally. Fish, when you can, down the stream.

In throwing the fly, a most important point, raise the arm well up, without laboring with the body; send the fly both backward and forward, by a sudden spring of the wrist. Do not draw the fly too near, or you lose your purchase for sending it back, and therefore require an extra sweep in the air before you can get it into play again. If, after sending it back, you make the counterspring too soon, you will crack off your tail-fly; if a moment too late, your line will fall in the water in a heavy and slovenly manner. The knack of catching the proper time is what you want to learn, and that can only be done by a little careful practice. When a skilful fisherman makes his cast, the extreme end of the casting-line reaches the water first, and this is as it should be; and when it is so, the line falls lightly and almost unperceived upon the water.

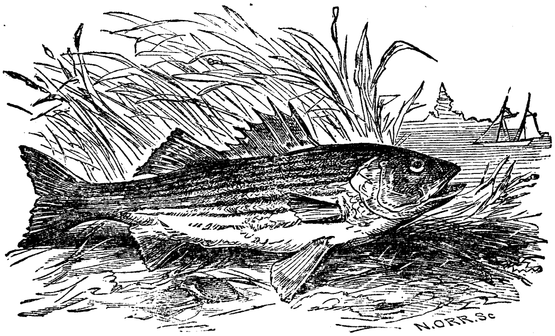
We should recommend beginners to put their rod together, draw their line through the rings some ten or twelve feet, and practise without casting-line on some grass-plot, until they find that they can obtain the necessary skill without making a crack like a coachman. Throwing the fly should also be practised with the left hand, as it will often be found a great relief. To change hands will also enable you to fish with the one next the river, on whichever side you may be, and whether you go up or down. After the following hints have been studied and you are perfect in them, you may commence the sport. Avoid going too close to the water, if the stream is a small one, and never by any chance permit your shadow to be thrown on its surface, availing yourself of stumps and rocks to hide you whenever available. No fish has keener sight than a trout; and if he should be on a ford feeding, one glimpse of the intruder will send him to the depths of the neighboring pool or under some inaccessible rock, without the slightest desire to renew his disturbed meal. Always fish with the shortest possible line, as you are thereby enabled more certainly to strike your fish when he rises, which is done by an almost simultaneous movement of the wrist, but nothing more—you will at once perceive if the fish is stuck, and your movement will be sufficient to make the hook take hold, but not to tear it from its grip. When a fish is hooked, be particularly cautious that no sudden strain is put on the line, and keep cool and ready for any emergency. If the trout is strong and in prime condition, his first endeavors to free himself will be by throwing himself out of the water, and the angler must be well prepared for this frequently successful plan. Immediately he is above the surface, drop the point of your rod so as to give him a slack line, for if the line should be taut and he strike it in his fall, he will invariably tear himself loose; but at no other time should the line be slack, as the hook, if not borne upon, is apt to work out. The next effort will probably be to run strong up stream: let him go, bearing sufficiently against him to wear him out; as soon as he stops, wind in your spare line as short as possible, almost to the casting-line, but on no account beyond; perhaps he will endeavor to make another run, but each successive one will be more feeble than the previous—always taking carefully in line as soon as he halts; he may now endeavor to go down to the bottom and get amongst rubbish, stones, etc., which must be carefully prevented by giving him the rod, so that all his efforts will come upon its spring. If you have to move from the place where you hooked the fish to land him, always go down stream, and endeavor to keep his head above water, and do not attempt to land him till thoroughly exhausted. Never attempt to lift your fish out by the line, as the dead-weight will frequently break the hold, but use your landing-net, which must be put under and behind, not attempting to raise it from the water till you see that he is in the pouch.

In fishing with the minnow, you use a stouter rod, and shorter top, with a two yard leader, and a Limerick hook, from No. 2 to 5, according to the size of your bait. If you put on the bait in the old way, you must keep it in motion; but, secured as we have before described, the bait will move itself.

In bottom fishing, you may either cast out, and draw gently in, or let it remain stationary, if your worm be lively. Under banks, or near rocks, if the worm be dropped in carefully, and the angler keep himself concealed, he stands a chance of taking the finest trout.

The time to strike, experience will show you better than any thing else. Do not drag him out, even if he be small, as though you wanted to pull the hook from his jaws; and if he be large, give him plenty of line, and play him till he is exhausted, or you may lose both hook and leader.

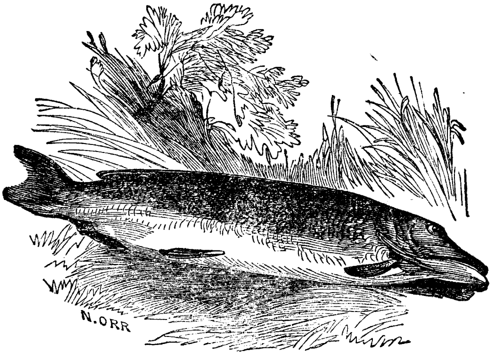
STRIPED BASS, OR ROCKFISH.



This is a fine game fish, abounding in the rivers, bays, and inlets from the capes and bays of Florida to those of Massachusetts, and in the spring of the year ascending the rivers to spawn. The rod and tackle required is the same as for the salmon, with a hook from No. 0 to 3, according to the game you are likely to find. The bait is minnow, shiner, or shad-roe, and when in the bays or mouths of rivers, shedder crabs, shrimp, and shad-roe in their season. In boat fishing, in still water, you use a cedar or large cork float, but in fishing at the bottom of dams or in swift currents, capital places, you have no float, and no other sinker than a plain swivel.

You manage them, in striking and taking, like the salmon. They can be caught also by trolling, with either squid or spoon-bait, or minnow.

PIKE.



The varieties of this fish are numerous. Besides the true pike, there is the pickerel, and, in the west and southwest, the *Muskelunjeh.* Then there is a fish known on the Ohio and its waters as the salmon, but properly called the

PIKE-PERCH,

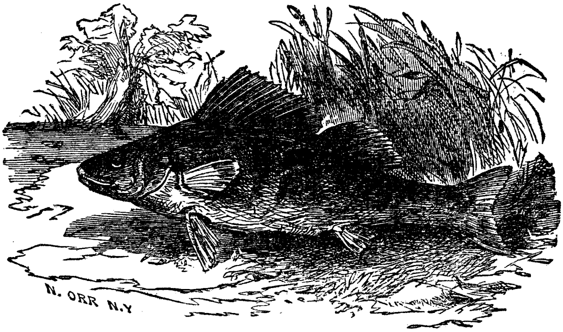
Which is taken in the same manner, and is a bold and game fish. They are in time at all seasons, except just after their spawning in April and May, and may be taken even in winter by making a hole in the ice. During the very hot summer months they will not bite freely.

You will want for pike-fishing a similar rod and line to that used in catching salmon; but the hook must be set on catgut, covered with wire, such as is used for the smallest-wired guitar-string, or the teeth of a large pike will saw it through. He fights desperately, and you will need a gaff generally. If you attempt to take him without, grasp him by putting your finger and thumb in his two eyes. If you are not careful, he will snap your finger either off, or wound it fearfully, and that, sometimes, when you think him exhausted.

For bait you can use minnows, large chubs, small suckers, red-horse, or frogs—he is not particular. An extra swivel or two, here and there, in the first three yards of your line, may be useful.

THE PERCH.

In this family you will find the white, yellow, and black or red perch. In the West and Southwest, they call the black bass *black perch*, but he is a different fish, a *gristes* and not a *perca*. Perch-fishing is very pretty sport. You do not require a very strong line, nor stout pole, and you will rarely, unless with a big fellow, have occasion to use the reel. He is a quick biter, and scarcely ever nibbles. The bait may be small minnows, shrimp, or worms—the latter almost always good in fresh water. Great numbers are taken in rivers, from the first hour before the flood of tide to the hour



PERCH.

after, just outside of the channel-grass, with a bow-line, made with a whalebone, which is kept near the bottom by a dipsy. Each end of the bow is furnished with two or three hooks, set on four or five inches of gut, and baited with worms. Sometimes five or six are caught at once. From May to July is their best season, and the hook is a Limerick trout, from 2 to 5 in size.

BLACK BASS.

This fish is peculiar to the Western lakes, and the streams running into the great rivers of the West. It resembles, in general appearance, the sea-bass, but is not black, though it has a blackish appearance above. There are several varieties—some bottle-green on top, some with broad stripes around them, that fade after they are dead—and all game. They harbor in the deep holes in summer, shooting out into the shallows, at times, after small fish. The best bait is the minnow or chub, to be caught in their vicinity, or the brooks round about; and if you want big fish, use tolerably large bait.

You take a medium-sized rod, with about fifty yards of line, and a yard leader. A swivel sinker, large enough to keep your bait from the surface, and a float so large that your bait cannot pull it under, are required. Put your hook through the gill-cover of the chub, set your float from three to six feet deep, according to the depth of the hole, and throw it gently in. Do not strike the first time the float goes under. Wait for the second time, and then strike. Play him well, giving him line in proportion to his size and strength. He plays game for a while, but soon gives up. A landing-net, or your finger in his gills, will secure him.

The above directions, with little variation, will answer for the pike-perch in the Western streams.

THE WHITE LAKE-BASS.

This fish may be treated like the white perch.

THE RED-EYE.

This is a Western fish, looking like a cross between the striped bass and the sunfish, with a red spot in his eye, whence the name. He is a game little fellow, and to be taken after the manner of the white perch. He is good at all seasons. His haunts are principally under the banks, and beneath overhanging bushes.

RED-HORSE.

This is a species of soft-fleshed fish that is not much sought after except in spring, when he swarms in the Western waters. He will not bite well at that time, and they take them by spearing. He may be caught with a worm, by ground-fishing, in the autumn months, but is bony, and not prized. Akin to him is his Eastern relative, the

SUCKER,

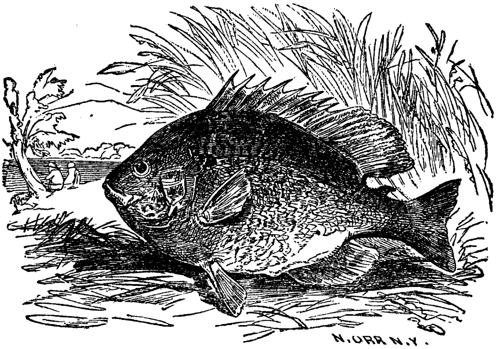
Who is to be found in our rivers and streams, and the

MULLET,

Who bites a little better than the preceding at a worm. You must always fish on the bottom for these, with a small hook, and any moderately strong line. They require no skill to secure, and the coarsest and cheapest tackle will answer.

SUNFISH.

Every boy knows him. There are several varieties. An extemporized rod, of length according to the place you fish, a light line, a No. 7, 8, or 9 hook, a lively worm or a grasshopper, and you have him. He loves, like the red-eye, to lie in holes under the bank, and in tolerably deep water. His spines protect him from the larger fish, and he is quite game and fearless, as well as very handsome.



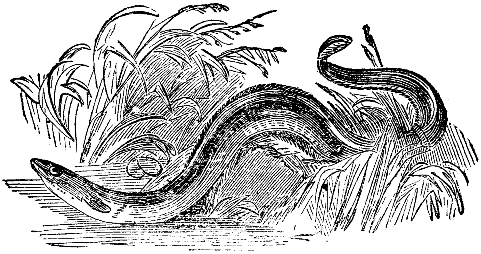
SUNFISH, OR BREAM.

CARP, OR TENCH.

This is a naturalized fish in the Eastern part of this country; though there is a fine large carp in the Western waters. The mode of taking both is the same. You require strong tackle; for he is a heavy fish sometimes, and strong; a light quill float, a short leader of gut, and a light-colored worm—a brandling being better than an angle-worm. Fish on the bottom, or near it. He is a very shy fish, and you had better bait the spots you mean to fish the day before, by throwing in bread-crumbs, chicken-entrails, or lumps of dough.

EEL.

There is good sport sometimes with this fellow, in bobbing; but he is not much liked on a hook, from his habit of twining the line, and the slime he leaves on your fingers if you handle him. He will be found everywhere, especially in muddy bottoms, and boys need no instruction about catching him. Bobbing for eels is very amusing night sport. You string worms on threads, by running a blunt-pointed long needle through them from head to tail. When you have enough strings threaded, you tie the ends together, and then fold them into a regular hank, like a hank of yarn. This you double and treble, until it is about three inches long. Through the middle you tie a stout cord, to the bottom of which is a round dipsy. Over this last the two ends of the bunch, which should be about the size of a boy's fist, hang. You anchor your boat on the muddy flats of a river, at high tide, or lean over the bank of a creek or river at a muddy bottom, and drop in your bob and sinker. Presently you feel a sharp pull. Draw up into the boat, or on the bank. Your eel has his teeth entangled in the thread, and cannot generally let go until he is in the boat, or on the bank. Night is the time, and the sport is sometimes very lively.



The way to grasp an eel on the hook, is to place the second finger on one side of him, and the first and third on the other, about an inch and a half from his neck. Then by pressing the fingers together he cannot move, and you may take the hook from his mouth, and throw him in your basket.

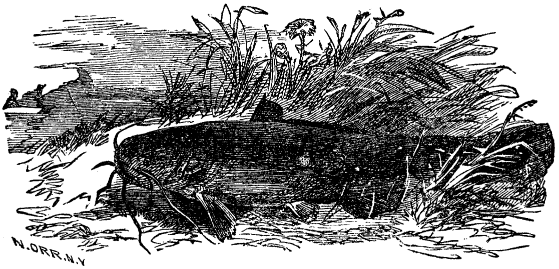
GARFISH.

This troublesome fellow, called often the garpike, having a long bony snout, armed with teeth, is a great nuisance to all boys in the West and Southwest, when they fish, by stripping off their bait. No hook will enter his hard snout. The best thing, when garpikes are around, is to go somewhere else. If you want to catch him, however, prepare a bunch of thread and horsehair, which dispose of around your live bait, loosely but firmly.

Pull out suddenly on the bite, and the chances are that the gar's teeth will be so entangled that he will drop on the bank.

CATFISH.

The ordinary mud-cat, bull-head, or bull-trout, is little prized, and may be caught, like a red-horse, by ground-bait, either a worm, piece of beef, or dough-bait. But the blue catfish of the Western waters fights very well; and there is a variety, called the white catfish, which comes from the sea in the east, to spawn yearly, about June and July, that is game, and rather handsome. He is more slender than the others, semi-transparent when held to the light, has a forked tail like a herring, and weighs from four ounces up to four pounds. He may be caught like the other. In the Schuylkill River, a number were kept from returning to the sea by the erection of the dam at Fairmount, and they bred in the river in great numbers.



ROACH.

This is a silver-sided, handsome fish, small, and considered poor eating. He may be taken in most of the rivers in the eastern part of the Northern States, in the same manner as the sunfish. He will bite well at small lumps of dough.

GOLDFISH.

These fish, which are a species of carp, originally brought from China, have escaped into many of our rivers, from fish-ponds, and have bred there. Their capture is like that of the sunfish, as is also the

CHUB.

But this is mostly found in small streams, under the bank, or near projecting roots. They, with the dace, shiner, minnow, and gudgeon, are principally used for bait. A willow swivel, a No. 10, 11, or 12 hook, a stout piece of sewing-thread, a worm, and a quill float, if the latter be required, and you can land them very rapidly.

As some of our young readers may happen to live near the shores of the ocean, or some bay, or may be taken there on a visit, we will mention the principal fish caught off the Atlantic coast. The finest of all these, probably, is the

SHEEPSHEAD.

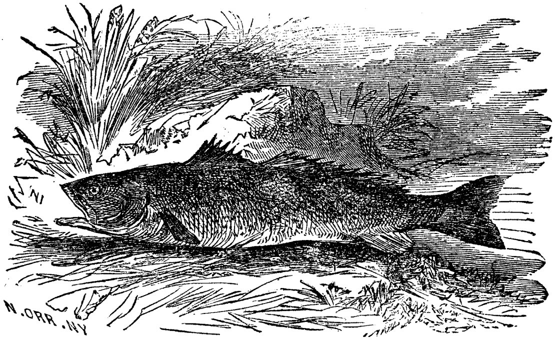
He has a smutty face, banded sides, prominent eyebrows, a grooved dorsal fin, extending entirely down his back, and a queer mouth, not unlike a sheep's, whence the name. To capture him you require a strong cord, a quarter of an inch in diameter, from twenty to fifty yards long, a heavy sinker, and a stout blackfish hook, and either soft shell clam, with the shell on, or small rock-crab, and fish near the bottom.

There is a fresh-water sheepshead, caught at times in the lakes, but he is worthless, his flesh being tough, leathery, and disagreeable.

DRUMFISH.

This is a very large fish, and not likely to be taken by a boy alone, and we only mention it because, when you are fishing for bluefish and bass, you may get one on your hook, and unless you are very expert, and he is very small—say about fifteen pounds only in weight—he will teach you the necessity of always taking extra hooks and leaders when you fish.

WEAKFISH.

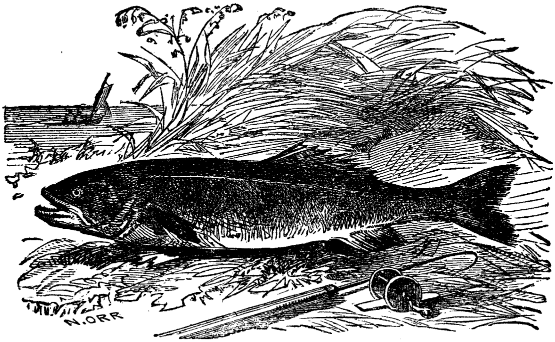


This is sometimes called wheatfish, and sometimes squeteague. He has an even tail, speckled back and sides, one or more sharp, long front teeth in the lower jaw, and yellowish ventral fins. He is found chiefly in salt or brackish waters, in New York, Connecticut, and Massachusetts. He bites at shrimp and shedder crab, and is to be caught with the same tackle and in the same manner as the striped bass, with whom he herds. They will be found, however, in rather deeper water, farther from shore, and more in the eddies.

KINGFISH, OR BARB.

This is the most spirited fish in resisting capture that can be found. He is only found in New York bay, and there only as an occasional visitor. He is about sixteen or eighteen inches long, with a pendulous bit hanging from his under lip, light brown color, glossed with blue and silver, and dark blotches and spots. He may be captured with striped bass tackle and bait, but wants about a No. 4 Salmon hook.

BLUEFISH.



This fish is taken by trolling with the artificial squid, a piece of lead, mother-of-pearl, or bone, about four inches long, armed with a No. 0000 Kirby hook, with the bend of the hook at right angles with the flat side of the squid. The line is cotton, stout, and from forty to sixty yards long. When the fish is hooked, haul in steadily and without intermission, or the fish will throw himself off

BLACKFISH.

He is sometimes called the tautog. He may be found in the bays from Cape May to Cape Cod. Striped bass tackle, and soft-shelled clam bait, are wanted for the blackfish; but he will often bite readily at the large salt beach-worm. You must look for him on rocky bottoms; and he will not bite well during a thunder-storm, nor in dull weather.

REDFISH.

This is a fish to be found southward of Cape Hatteras, as far as Pascagoula, and occasionally in Delaware Bay, and on the New Jersey coast. His length is from one to four feet. He is almost like silver in color, but becomes darker after getting out of the water, and dying shows the prismatic colors. Just in front of his tail-fin, near the back of the tail, is a black or brown spot, bordered with white, which has given him the name in some places of the branded drum. His time of biting is from March until January, except very far south, where he is taken all the year. He is caught with a stout hand-line and cod-hook, with shrimp bait or pieces of fish. He may be taken with rod and reel by a patient and dexterous angler.

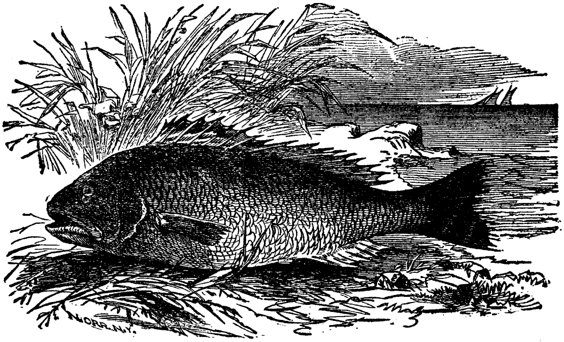
CODFISH.

Off the coast of Massachusetts these fish are mostly taken. There is no art in catching them. A coarse, strong cord, a large blackfish hook, a piece of mud-clam, or moss-breaker, and a heavy sinker. They bite fiercely.

TOM COD.

This, sometimes called the frostfish, looks like a young codfish, and is caught in all the bays, inlets, and mouths of rivers along the Atlantic coast. It is a little fellow, running from six to fifteen inches in length. He can be taken with the simplest tackle, and with soft clam, hard clam, or shrimp bait, and occasionally will bite freely at worms.

SEA-BASS.

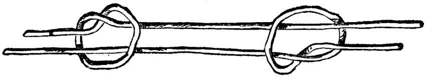


This fish is well known to all who are likely to fish for him. Sometimes boys from New York, or other large cities on the coast, make an excursion in company with older persons, in the steamboats which are chartered for such a purpose during the summer months. All one has to do is to take with him about eighty feet of stout hemp line, with two or three No. 1 Kirby hooks, and a dipsy weighing a pound. This, with hard clams, well salted, for bait, and a pair of old gloves, to keep the hands from being chafed by hauling on the line so much, completes his outfit. He will be apt to catch some porgies at the same time.

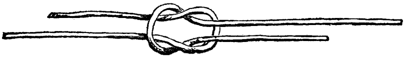
The other sea-fish boys are likely to meet with are flounders and smelt.

The former are caught near New York and Boston, and all along the coast of the Middle States, with a small drop-line, No. 8 hook, and soft clam bait. The smelt is taken in the rivers of Massachusetts, New York, and New Jersey, where they run to spawn in March and April, and return again in October and November. They are caught with a small line, a No. 2 or 3 trout hook, a short leader, and pieces of minnow or frog.

In fishing, the angler will often want to tie a secure knot. We can recommend the water-knot, made as follows:

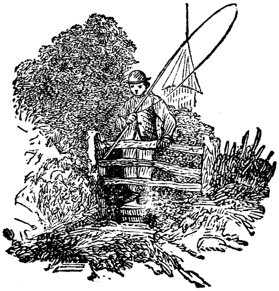


To tie a leader to a line, you use the ordinary loop-knot, although the neatest tie for that purpose is the loop hitch, which we give below.

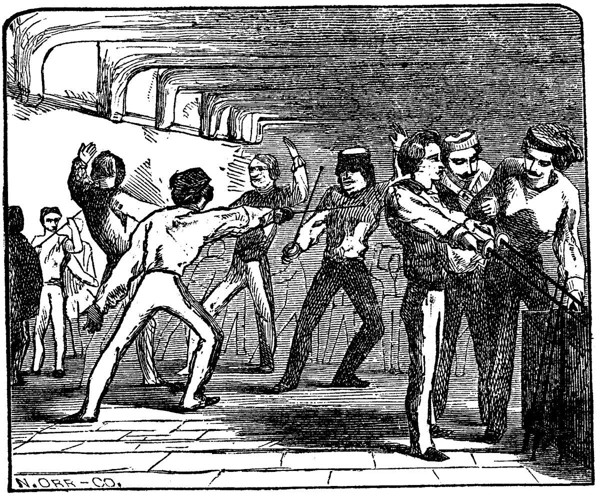


There are many other fish which our space does not permit us to describe. We have been obliged to content ourselves with a few remarks about the best known specimens, and must trust to our young friends to improve their knowledge, as they may easily do, by personal observation, and by inquiry among the hardy fishermen who are to be found at all our sea-side resorts, and are always ready and willing to gratify the curiosity that springs from a praiseworthy desire to gain knowledge.

And thus we leave our young friends, with the hope that they may not only amuse, but also instruct themselves at the sea-side. The end of all investigation into the nature and habits of living creatures is the same—an uncontrollable wonder and admiration at the wisdom which has adapted the structure of every thing that breathes to its wants and necessities; and a recognition of the goodness of the Creator, on whom the "eyes of all wait," and who, with never-failing bounty, "giveth them their meat in due season."



FENCING.



It may be that no boy who reads this book will be called on to use either the rapier or broadsword, but the value of the scientific management of these weapons as an exercise,—from the grace it imparts to the movements, the vigor to the system, the keenness of eye it encourages and promotes, is undeniable. The most eminent physicians concur in recommending these exercises, that of the small-sword in particular.

In learning fencing with rapiers, there are required for each one, a strong wire mask to protect the face; foils, or mock swords, with buttons on the tip; a well-padded glove for the hand, and a shield of leather sewn on the front and collar of the jacket. Before proceeding to exercise, the buttons on the tip of each foil should be carefully examined, to see that they are secure.

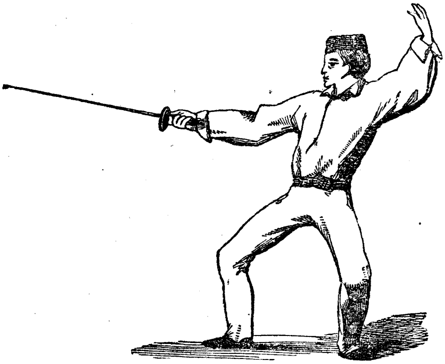
All being ready, the beginner puts himself in the position called

THE GUARD,

From which all movements, whether offensive or defensive, are made. The beginner must stand with his knees straight, his feet at right angles, heel to heel; the right foot, right side, and face directed to the master. The body must be held upright and firm, the arms hanging down by the side, but easily and without constraint; the left hand holding the foil a few inches beneath its guard. Next let him bring the right hand across the body, and seize the foil-handle; by a second movement, bring the foil above the head, the hands separating as they ascend, until both arms be nearly extended upward and outward. Here pause. This may be called the *first position* of the Guard.

These movements should be frequently practised, as they accustom the arms to move independently of the body, flatten the joints of the shoulders, and give prominence to the chest.

To arrive at the *second position* of the Guard, the right arm, with the foil, is brought down to the front, until the right elbow is a little above and in advance of the waist; the fore-arm and foil sloping upward; the point of the foil being the height of the upper part of the face; then, by a second movement, the learner must sink down, separating the knees, and stepping forward with the right foot fourteen or sixteen inches; for, of course, the guard of a tall man will be wider than that of a short one. However, his own comfort in the position will direct him as to the distance; and the general rule is, that the knee of the left leg will jut over the toes of the left foot, and the right leg from ankle to knee be perpendicular. It is in this position that he will receive all attacks from an adversary, and from this position will all his own attacks be made. Also in this position will he



ADVANCE

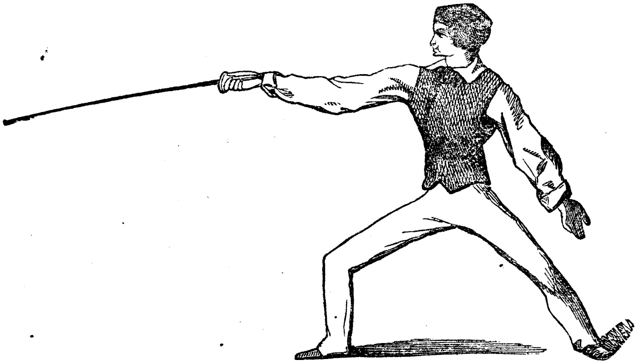
Upon an adversary, when beyond hitting distance. The step in the advance is usually about that of the width of the Guard, although of course this would vary with circumstances. The step is made by advancing the right foot the distance we have named; and on its reaching the ground, the left foot is brought up and takes its place. To

RETREAT,

The reverse of the above movement is made. The left foot takes the lead, stepping to the rear about as far as the right had stepped to the front; the right occupying its place on its taking up its new position. The next movement,

THE LONGE,

Is a very important movement, and is rather difficult to make properly, and fatiguing to practise. Indeed, the first movements in fencing are the most trying to the learner; and he must not be discouraged if he fails to do them correctly at first—practice only will give him this power. The Longe is that extension of body which accompanies every attack, and is thus made:



the right arm is extended straight from the shoulder, the arm and blade being on the same level; by a second movement, the right foot is raised from the ground, and a step made forward, about eighteen inches in length, while the left remains firmly planted in its place. At the instant that this step is made, the left hand is allowed to fall within a few inches of the left thigh, and the left knee is stiffened back until the leg is perfectly straight.

The thigh of the right leg will now be in a position nearly horizontal; from the knee downwards, perpendicular. Having executed the Longe, the next movement to be made is

THE RECOVER;

That is, to return from the position of the Longe to that of the Guard, and is thus effected: the left arm is nimbly thrown up to its place, the right arm drawn in, and the left knee re-bent. These movements must be made at the same time, as it is their *united* action that enables a person to recover from so extended a position as the Longe quick enough to avoid a thrust, if his own attack has failed.

These movements must be frequently practised before any others are attempted—the Guard, the Advance, the Retreat, the Longe, and the Recover; and when the learner has attained some proficiency in them, he may begin the more delicate movements of attack and defence. Of these we will now speak.

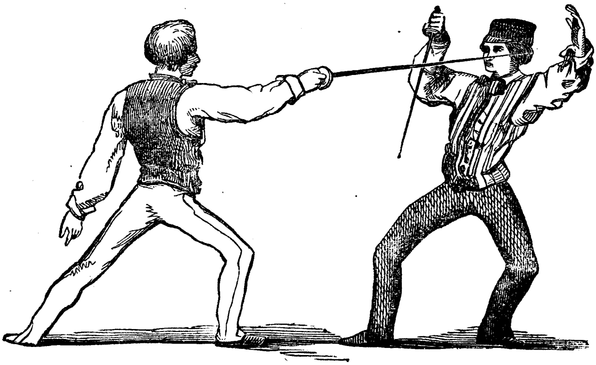
THE ENGAGE.

It is customary for adversaries, on coming to the Guard, to *Engage*, or to join blades, on what is called the *inside*, that is, the *right* side; although there are occasions on which it is advisable to engage on the *outside*, or on the left; otherwise called the *Quarte* or *Tierce* sides.

Two men thus opposed to each other will at once perceive that there are two lines of attack open to them, *i. e.*, the line inside and the line outside the blade—these, and no more. But these may be, and in fencing are, subdivided into inside above the hand, and inside under the hand, and the same subdivision for outside. This gives four lines of attack—or, to speak more simply, gives four openings through which an adversary may be assailed. Now, to protect each of these assailable points, are four defensive movements, called

PARADES.

Each opening has its own parade or defence, and each parade will guard its own opening, and, strictly speaking, no other. The opening inside above the hand is defended by two parades.



As its name imports, the first and most natural parade is that of *Prime.* The action of drawing the sword from its sheath is almost exactly the movement made use of in the parade of Prime.

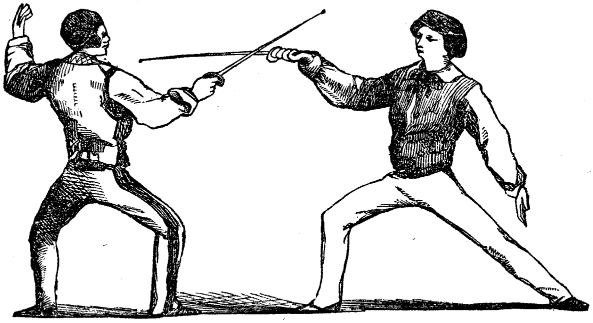
In this parade, the hand is raised as high as the forehead, so that the fencer can see his opponent's face under his wrist. The blade of the foil is almost horizontal, but the point is rather lowered toward the ground. As this parade will throw the right side of the body open to the adversary's sword, it is good play to disengage from left to right, and deliver a rapid thrust at the adversary, in order to anticipate him before he can bring his own sword round for another thrust. His point will be thrown far out of line, so that he is behindhand in point of time.

This is a very useful parade for fencers of short stature, as they can sometimes get in their blade under their adversary's arm, after they have parried his thrust.

The other parade is that of

QUARTE.

It is thus formed. On the approach of the point of an adversary's blade (and how these approaches are made we will presently explain), the right hand is moved a few inches—three or four will be enough—across the body on the inside; the hand being neither depressed nor raised, and the foil being kept on the same slope as in the Guard. This guards the body on the inside above the hand, but (and here comes an important law in fencing) the very movement which has guarded the body on one side has exposed it on the other; this is the case with all the simple parades.

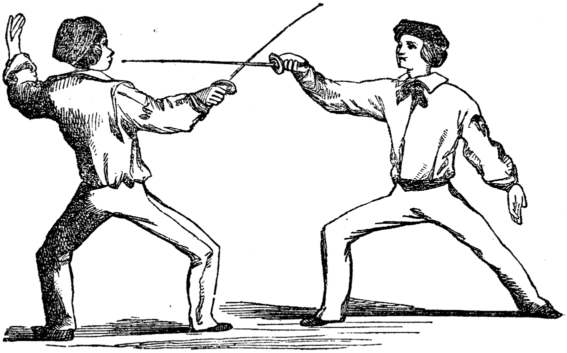


Suppose, now, that the exposed part *outside above* the hand were assailed, then the defence for it is the parade of

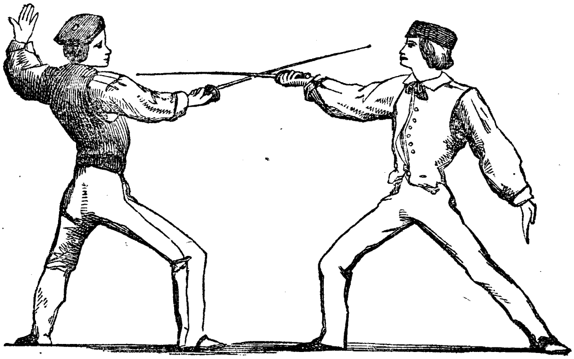
TIERCE.

It is formed by turning the hand with the nails downward, and crossing to the opposite side some six or eight inches; the hand and point at the same elevation as before: this will guard this opening. If, however, the attack had been made *under* instead of over the hand, then the proper parade would have been *Seconde*.

There is another method of parrying called *Quarte*, over the arm, which is executed by making almost the same parade as in Tierce, with this exception—first, the hand is retained in its original position, with the nails upward; and, secondly, the point is not raised above the eye of the adversary.

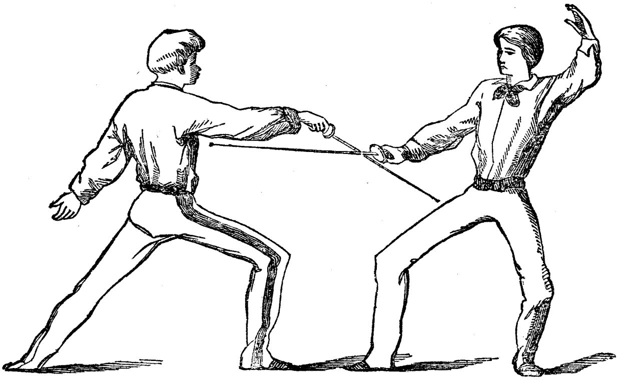


It is rather more delicate than Tierce, but wants its power and energy. The Ripostes, or reply thrusts, are made as they would have been had the parade been that of Tierce.



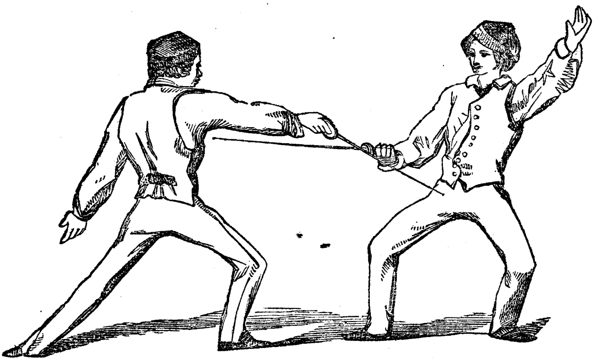
SECONDE

Is formed by turning the hand in the same position in which it was turned for Tierce, but the point of the foil slopes as much downward as in Tierce it did upward; the direction and distance for the hand to traverse being the



same. Again, had the attack been delivered at none of these, but at the *inside under* the hand, then the proper parade would have been

DEMI-CERCLE,

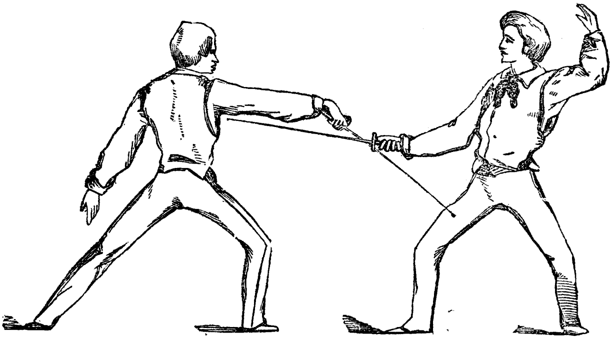


Which, as its name expresses, is a half-circle, described by a sweep of the blade traversing the *under* line. Next comes the parade of

OCTAVE.

In this parade the hand is held as in Quarte; the hilt of the foil is kept lower than that of the opponent; the blade is almost horizontal, the point being only slightly lower than the hilt, and directed toward the body of the adversary.

Octave is extremely useful when the fencer misses his parade of Demicercle, as there is but a short distance for the point to traverse, and it generally meets the blade of the adversary before the point can be properly fixed. Moreover, it brings the point so near the adversary's body, that he will not venture to make another thrust until he has removed the foil.



Thus we have enumerated, and partly explained, the forms and uses of these four parades: they are called Simple Parades, to distinguish them from another set of defensive movements, called

CONTRE-PARADES.

We have said and shown that a man standing foil in hand, in the position of the Guard, is exposed in four distinct places to thrusts from an adversary, within longeing distance. We have also shown that he has a defence for each of these exposed places; but if a man has but *one* defence for each assailable part, then his adversary, knowing beforehand what the defence must be, would be prepared beforehand to deceive him. But if he has a reserve—if he has a *second* defence for each part, then the adversary cannot tell what the defence will be, until his attack, false or real, is begun.

To meet this contingency, a second series of defences have been devised, which are of an entirely different nature from the *Simple* Parades.

Again, as each of the simple parades is framed to guard only one opening, it was found desirable that the contre-parades should be of a more comprehensive character. They are therefore devised so that each is capable of protecting the entire front. It is evident that this object could not be attained without the sacrifice of quickness, because a larger space must be traversed, and therefore more time is occupied with a contre than a simple parade.

To know one contre-parade is virtually to know all, as they are all formed on the same plan. They are all full circles in the position of hand and direction of foil of the different simple parades; or, more clearly speaking, each simple parade has a contre-parade; there are, therefore, four simple and four contre-parades, which may be thus arranged:

Quarte	Contre de Quarte.
Tierce	Contre de Tierce.
Seconde	Contre de Seconde.
Demi-cercle	Contre de Cercle.

We have said that a contre-parade is a full circle in the position of hand and direction of blade of its simple; thus, contre de quarte is made by retaining the hand in the position of quarte, while the foil describes a circle descending on the inside, and returning by the outside to the place of its departure. So with all the others, the foil *following the direction of the simple* parade, of which it is the contre. These complete the entire system of defences.

We now come to movements of an opposite nature, namely, the

ATTACKS,

And shall begin with the most simple of them. We will again suppose two adversaries standing, *en guard*, within longeing distance of each other: now, the most simple movement that the attacking party could make, would be

THE STRAIGHT THRUST,

To the outside or inside, according to his line of engagement. We have, in describing the longe, in effect described the straight thrust; it is but a longe in a straight line, taking care, however, to feel firmly the adversary's blade, but taking care also not to press or lean on it during the delivering of the thrust.

Next in character comes

THE DISENGAGEMENT.

This attack is made by dropping the point of the foil beneath the adversary's blade, and raising it on the opposite side, at the same time, rising with the arm fully extended: on the completion of the extension the longe is made and the thrust delivered.

THE ONE-TWO

Is but a double disengagement, the first being but a feint or false attack, to induce the adversary to form a parade to cover the part threatened, for the covering of one part of the body exposes the opposite: the second disengagement is made to take advantage of this exposure. The arm is extended halfway on the first, and then wholly on the second, to be immediately followed by the longe.

The practice of this lesson evinces the advantages of a proper and sufficient extension, and a parade that is not too wide. The quick extension of the left leg and right arm, performed during the disengage, should throw the point towards your adversary's breast with such an emphasis as to resemble a thrust; at once forcing him to a parade, and taking a position much nearer to his body, rendering a second disengage beneath his tierce parade almost certain to hit, if not met with corresponding neatness by the defence. The parades must be precise, coming to sufficient guard, and no more. If the parade of tierce be made too wide, you cannot get back to carte in time.

Let the attacking party have the option of thrusting home in the *one*, as the adversary's knowledge that it is but a *feint* may prevent him from going fully to guard.

ONE, TWO, THREE.

When a facility has been acquired in practising the *one*, *two*, the pupils may commence the *one*, *two*, *three*, making the first disengage by the extension of the arm alone; the *two* by the full extension; and the *three* by the complete longe, to be answered by the parades of *tierce*, *carte*, and *tierce* again.

Let the attack be neat and deliberate, not exhibiting so much anxiety to obtain a hit as to be correct and precise; quickness will follow, of course. The attacked party should stand his ground, with his left foot firm; as nothing gives greater promise of excellence than receiving the hit without flinching the body. Make the parades neat, and keep cool; for any nervous snappishness in your motion is fatal to good fencing. The simple turn of the wrist from carte to tierce, is almost sufficient to cover the body. Take care that your hand is high enough, so that you do not oppose the *foible*, or weak part, of your blade, to the *forte*, or strong, of your adversary's.

APPELS, BEATS ON THE BLADE, AND GLIZADES.

Appels, beats, and glizades, tend to plant you firm upon your guard, to embarrass your adversary, and cause him to give you openings; they may be performed previously to simple thrusts, feints, or counter-disengagements, &c. An appel, or beat with the foot, is performed either on the engagement of carte or tierce, by suddenly raising and letting fall the right foot, with a beat on the same spot; taking care to balance the body, and keep a good position on guard.

The beat on the blade is abruptly touching your adversary's blade so as to startle him, and get openings to thrust. If he resist the beat, instantaneously disengage, and thrust home. If he use a simple parade, mark feint one, two; or, if he use a counter-parade, counter-disengage, or double.

Glizades are slightly gliding your blade along your adversary's, at the same time forming the extension of the arm, or the complete extension, managing and restraining your body, so as to be aware of his thrust, and to make sure of your own. If you be engaged in carte, out of measure, a quick advance, with a glizade, must infallibly give you some openings, either to mark feints or otherwise.

THE BEAT AND THRUST.

This is another variety of attack. Supposing the adversary's blade to be firmly joined to yours, when you wished to deliver a *straight thrust*, there would then be danger of your falling upon his point. This danger is avoided by giving a slight beat on his blade the instant preceding your extension of arm, of course to be followed *en suite* by the longe.

The companion attack to this attack is

THE BEAT AND DISENGAGEMENT.

The *beat* here takes the character of the first disengagement in *one-two*, *i. e.*, becomes a *feint*, and is intended to induce the adversary to return to the place he occupied when the beat was made. You then immediately pass to the opposite side of his blade in the manner described in the *disengagement*.

It will be seen that all these movements pass *under* the adversary's blade. However, there are certain situations in the *assault*, as a fencing bout is called, when an adversary is more assailable *over the point* than under the blade; for this purpose there is what the French call the *coupé sur point*, or

CUT OVER THE POINT.

It is thus made: By the action of the hand, and without drawing it back at all, the foil is raised and brought down on the opposite side of the adversary's blade, the arm being extended during its fall to the horizontal position, on attaining which the longe is delivered.

CUT OVER AND DISENGAGEMENT

Is on the same principle as the *one-two* and the *beat and disengagement.* On the adversary opposing the first movement (the cut) with a parade, the second movement (the disengagement) is made to the opposite side, to be followed of course by the longe; the extension of the arm being divided between the two movements.

These attacks are called simple attacks, because they may be parried by one or more simple parades, according to the number of movements in the attack. In fact, every attack can be parried, and every parade can be deceived: it is the *additional* movement last made which hits or guards.

Thus, you threaten by a disengagement to the outside; your adversary bars your way effectually by the parade of *tierce;* you make a second disengagement to the inside, which is now exposed from the very fact of the outside being guarded (for both lines of attack cannot be guarded at the same time), thus converting your attack into *one-two;* but if your adversary parries quarte on your *second* movement, your attack would be warded off. This can be carried much further, but the above will, we think, be sufficient to explain the nature of simple parades and attacks.

To deceive a *contre*-parade, a separate movement, called a *doublé*, or

DOUBLE,

Has been invented; it is very simple in principle, and admirably answers the purpose. For instance, if you were to threaten your adversary by a disengagement to the outside, and if, instead of tierce, he parried *contre de quarte*, the double is then made by your making a *second* disengagement *to the same side as the first*, for it will be found that his *contre de quarte* has replaced the blades in the positions they occupied previous to your disengagement. You will then have an opening, and may finish the attack by the longe.

As all the contre-parades are on the same plan and principle, so are all the doubles. Of course, it is understood that you will make all the movements of the double *en suite*, and without allowing your adversary's blade to overtake yours.

ALL FEINTS.

The foregoing movements having been well practised in the lesson, the next step is that of *all feints* and *all parades*, and may be practised either with a master or fellow-pupil. The practice consists of one pupil standing on the defensive *entirely*, while another assumes the offensive, and attacks him with *all* the *feints* of which he is master, the other, of course, defending with all his parades. It is excellent practice, as it accustoms the pupil to think for himself gradually, he having thus but one set of movements to think about. He is therefore enabled to make them boldly, without having to encounter unknown movements from his adversary.

It also enables him to see the extent of his resources, both for attack and defence. When he can both attack and defend with some presence of mind he may then begin

THE ASSAULT;

That is, he may encounter an adversary, to attack or defend as occasion presents. He is then left to his own resources entirely. The following

GENERAL ADVICE,

Given by a very eminent fencer and excellent teacher, cannot fail to be of use:

"Do not put yourself on the position of the guard within the reach of your adversary's thrust, especially at the time of drawing your sword.

"If you are much inferior, make no long assaults.

"Do nothing that is useless; every movement should tend to your advantage.

"Let your movements be made as much within the line of your adversary's body as possible.

"Endeavor both to discover your adversary's designs, and to conceal your own.

"Two skilful men, acting together, fight more with their heads than their hands.

"The smaller you can make the movements with your foil, the quicker will your point arrive at your adversary's body.

"Do not endeavor to give many thrusts on the longe, thus running the risk of receiving one in the interim.

"If your adversary drops his foil by accident, or in consequence of a smart parade of yours, you should immediately pick it up, and present it to him politely.

"Always join blades (if possible) previously to another attack, after a hit is given."

BROADSWORD.

The principal distinction between the broadsword and the rapier is, that the latter is formed only for thrusting, while the former is adapted for cutting also. Indeed, those who use the broadsword are, in our opinion, too apt to neglect the use of the point, and to give their attention almost exclusively to the cuts.

The first lesson in the sword exercise is necessarily to know how to stand. The learner should be instructed to perform the different movements by word of command, remembering to consider the first parts of the word as a caution, and not to stir until the *last* syllable is uttered. At the last syllable, the movement should be performed smartly. In giving the word, the instructor always makes a slight pause, in order to give his pupils time to remember what they must do. For example, the words Draw Swords, is given thus: Draw . . . . . Swords—the word swords being spoken smartly, in order that the movement may correspond.

POSITIONS.

First Position.—Make the target* about fourteen inches in diameter, and place it on the wall, having its centre about four feet from the ground. Draw a perpendicular line from the spot at the bottom of the target to the ground, and continue it on the floor, in order to insure the proper position of the heels. The learner stands perfectly upright opposite the target, with his right side toward it, his heels close together, his right toe pointing to the target, and his left foot at right angles with the right. His arms must be clasped behind his back, his right palm supporting the left elbow, and his left hand grasping the right arm just above the elbow. In this position, he must bend both knees and sink down as far as possible. This will not be very far at first, but he will soon sink down quite easily. See accompanying figure (1).

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* For target, see page 165.

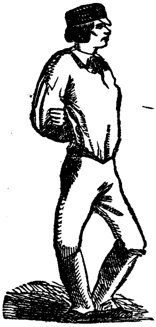


Fig. 1.

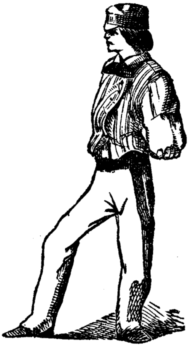


Fig. 2.

Second Position.—This is accomplished by placing the right foot smartly in front, about fourteen or sixteen inches before the left. (See Fig. 2.) He must accustom himself to balance himself so perfectly on his left foot, that he can place the right either before or behind it, without losing his balance.

Third Position.—The third position must then be learned. This consists in stepping well forward with the right foot, until the left knee is quite straight, and the right knee exactly perpendicularly placed over the right foot. Great care must be taken to keep the heels exactly in the same line, and the body perfectly upright. (See Fig. 3.)

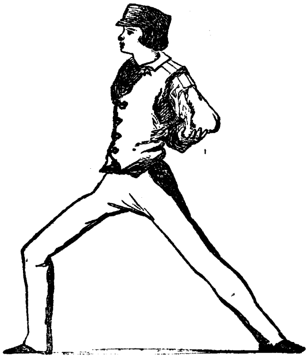
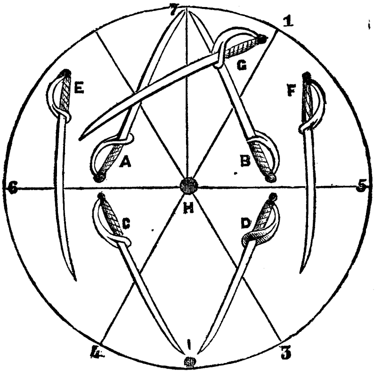


Fig. 3.

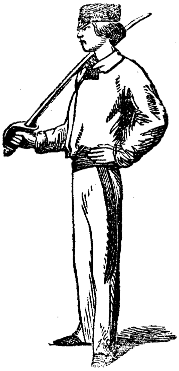
These preliminaries having been settled, the learner stands upright before the target, as in Fig. 1. A sword is then put into his hand, and the target is explained as follows:

TARGET.

The interior lines represent the cuts. Cut one being directed from No. 1 diagonally through the target, coming out at 4. Cut two is the same, only from left to right. Three is made upwards diagonally, and four is the same, only in the opposite direction. Cut five is horizontally through the target, from right to left, and six from left to right. Cut seven is perpendicularly downward. Care must be taken that the cuts are fairly given with the edge.



The swords drawn on the target represent the guards. The seventh guard ought, however, not to be made directly across, but must have the point directly rather forward and downward, as a cut 7 glides off the blade, and can be instantly answered either by a thrust or by cut 1.



The two dark circles represent the places where the thrusts take effect.

The learner begins by taking the sword in his right hand, having its edge toward the target and its back resting on his shoulder. His right arm is bent at right angles, and the elbow against his side. The left hand must rest upon the hip, the thumb being to the rear. At the word—

CUTS AND GUARDS.

CUTS.

Cut 1.—The young swordsman extends his right arm, and makes the cut clear through the target. When the point has cleared the target, continue the sweep of the sword, and by a turn of the wrist bring it with its back on the left shoulder, its edge toward the left. The arm is then ready for

Cut 2.—Bring the sword from 2 to 3, continue the movement of the sword, and turn the wrist so that the point is below the right hip and the edge toward the ground.

Cut 3.—Cut through the target diagonally, bringing the sword from No. 3 to No. 2, and bring the sword onwards, so that it rests with the edge downwards, and point below the left hip. At

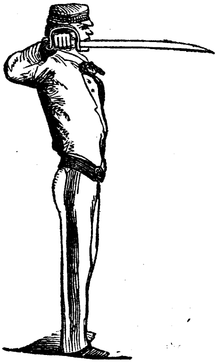
Cut 4.—Cut from 4 to 1, and bring the sword round until its point is over the right shoulder, and its edge well to the right.

Cut 5.—At the word Five, make a horizontal cut from 5 to 6, and sweep the sword round until it rests on the left shoulder, with its edge to the left, and its point well over the shoulder.

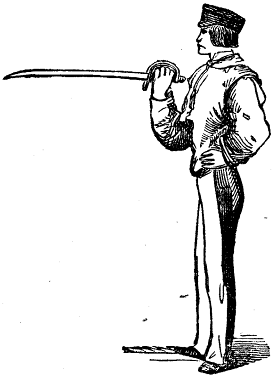
Cut 6.—Cut horizontally through the target, from 6 to 5, and bring the sword over the head, with its edge upward, and its point hanging over the back. From this position,—

Cut 7.—Make a downward stroke until the sword reaches the centre of the target. Arrest it there, and remain with the arm extended, waiting for the word

POINTS.

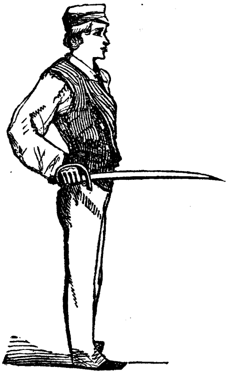


FIRST POINT.



SECOND POINT.

First Point.—Draw back the sword until the right wrist is against the right temple, the edge of the sword being upward. Make a slight pause, and then thrust smartly forward toward the centre of the target, raising the right wrist as high as No. 1, and pressing the left shoulder well back.



THIRD POINT.

Second Point.—Turn the wrist round to the left, so that the edge comes upward, draw the hand back until it rests on the breast, and give the point forward to the centre of the target, raising the hand as before.

Third Point.—Give the handle of the sword a slight twist in the hand to the right, so that the edge again comes uppermost, and the guard rests against the back of the hand. Draw back the hand until it rests against the right hip, and deliver it forward toward the spot at the bottom of the target, raising the wrist as high as the spot in the centre. The object in raising the wrist is to deceive the eye of the opponent, who will be more likely to notice the position of your wrist than of your point. In all the thrusts the left shoulder should be rather brought forward before the point is given, and pressed well back while it is being delivered.

GUARDS.

Wait after the third point has been delivered for the word

Defend.—At this word draw up the hand smartly and form the first guard. Make the other guards in succession as they are named, while the instructor proves their accuracy by giving the corresponding cuts. The guards must be learned from the target, by placing the sword in exactly the same position as those delineated. The guards are these:—

A. First guard.
B. Second.
C. Third.
D. Fourth.
E. Fifth.
F. Sixth.
G. Seventh.

The two spots H and I mark the places toward which the points are made, H for the first and second point, I for the third.

PARRY.

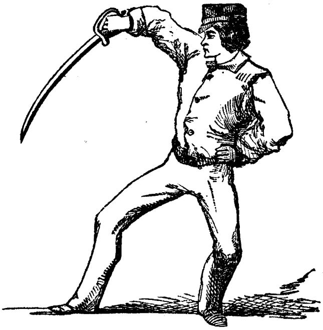
The parry or parade of a thrust is executed with the back of the sword. The firmest way of parrying is to hold the sword perpendicular, with its edge to the right and its hilt about the height of and close to the right shoulder; then, by sweeping the sword round from left to right, any thrust within its sweep is thrown wide from the body.

The parry is executed with the wrist and not with the arm, which must not move.

HANGING GUARD.

When the pupil is acquainted with both cuts and guards, he should learn the hanging guard, a most useful position, as it keeps the body well hidden under the sword, and at the same time leaves the sword in a good position to strike or thrust.

It is accomplished in the following way. Step out to the second position, as in Fig. 2, raise the arm until the hand is just over the right foot, and as high as the head. The edge of the sword is upward, and the point is directed downward and toward the left. The left shoulder is pressed rather forward, and the neck and chest drawn inward.

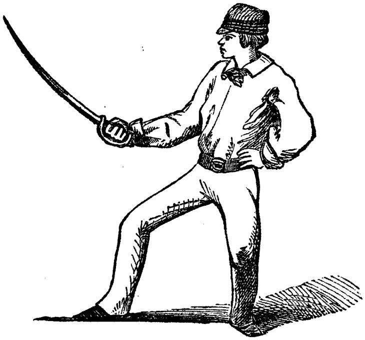


HANGING GUARD.

In this position the swordsman is in a position to receive or make an attack, as he may think fit. It is rather fatiguing at first, owing to the unaccustomed position of the arm and head, but the fatigue is soon overcome, and then it will be found that there is no attitude which gives equal advantages.

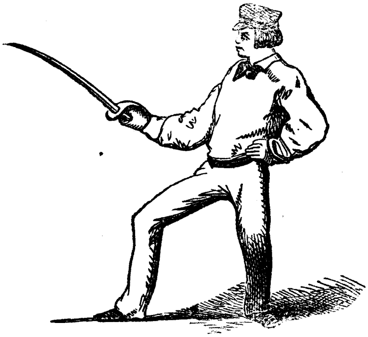
There are two other modes of standing on guard, each possessing its peculiar advantages. These are, the inside and outside guard. The inside guard is made as follows:

INSIDE GUARD.



Stand in the second position, having the wrist of the right hand nearly as low as the waist, the hand being exactly over the right foot. The point of the sword is raised as high as the eyes, and the edge is turned inward, as will be seen from the foregoing engraving.

OUTSIDE GUARD.



The outside guard is formed in the same manner as the inside, with the exception that the edge of the sword is turned well outward.

To get to the hanging guard, the words are given as follows: Inside Guard—Outside Guard—Guard.

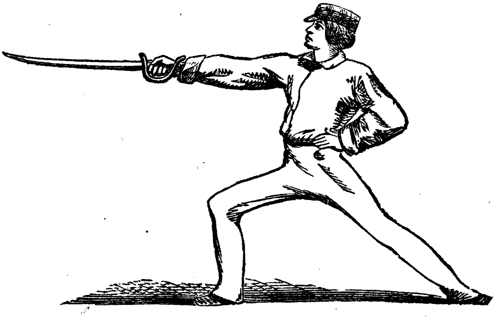
ATTACK AND DEFENCE.

The swordsman, having learned thus far, is taught to combine the three movements of striking, thrusting, and guarding, by the following exercise:

1. Inside Guard.
2. Outside Guard.
3. Guard.
4. Cut one.
5. First Guard.
6. Cut two.
7. Second Guard.
8. Cut three.
9. Third Guard.
10. Cut Four.
11. Fourth Guard.
12. Cut Five.
13. Fifth Guard.
14. Cut Six.
15. Sixth Guard.
16. Cut Seven.
17. Seventh Guard.
18. First point. [Prepare for the point in First Position.] Two. [Thrust in Third Position.]
19. Second Point. [Prepare for it in First Position.] Two. [Thrust in Third Position.]
20. Third Point. [Prepare.] Two. [Thrust.]
21. Parry. [Prepare to parry in First Position.] Two. [Parry.]
22. Guard.

Our young friends will find the foregoing a really excellent piece of drill, and sufficiently interesting also to make it a pastime. When the pupil can accomplish all these combinations neatly, accurately, and promptly, he will have made no inconsiderable progress as a broadswordsman or a single-stick player.

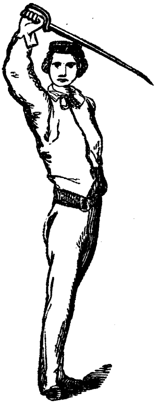
The young swordsman must remember that in this, as in all the exercises, the cuts and points must be given in the third position, as in the accompanying illustration, which shows the swordsman just as he has delivered the seventh cut, and is waiting for the next word before he resumes the first position.



SEVENTH CUT.

The guards, on the contrary, are given in the first position, as seen in the accompanying illustration, which illustrates the seventh guard.

These exercises are always learned with the single-stick, or basket-hilted cudgel, in order to avoid the dangers which would be inevitable if the sword were used. But as the single-stick is only an imitation of the sword, we will give the method of getting the sword out of the sheath into any position required.



SEVENTH GUARD.

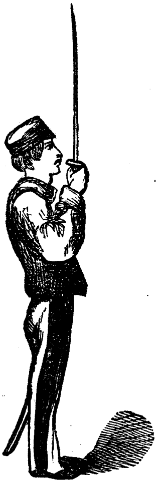
DRAW SWORDS.

The first word of command is *draw swords.* At the word *draw*, seize the sheath just below the hilt, with the left hand, and raise the hilt as high as the hip, at the same time grasping the hilt with the right hand, turning the edge of the sword to the rear, and drawing it partially from the sheath, to insure its easy removal.

At the word *swords*, draw the blade smartly out of the scabbard, throwing the point upward, at the full extent of the arm, the edge being still to the rear.

RECOVER SWORDS.

The wrist is now smartly lowered until it is level with the chin, the blade upright, and the edge to the left. This is the position of recover swords. The elbow must be kept close to the body, as in the following cut.



RECOVER SWORDS.

CARRY SWORDS.

The wrist is now sharply lowered until the arm hangs at its full length, the wrist being in the line with the hip, the edge of the sword to the front, and its back resting in the hollow of the shoulder, the fingers lightly holding the hilt. The left hand hangs at the side until the word *inside guard*, when it is placed on the left hip.

SLOPE SWORDS.

At the word *swords*, raise the right hand smartly, until it forms a right angle at the elbow.

RETURN SWORDS.

At the word, raise the blade until it is perpendicular, move the hilt to the hollow of the left shoulder, drop the point of the sword into the scabbard (which has been grasped by the left hand and slightly raised), at the same time turning the edge to the rear. Pause an instant, and send the sword smartly into the sheath, removing both hands as the hilt strikes against the mouth of the scabbard: drop them to the side, with the palms outward, and stand in the first position.

PRACTICES.

There are many exercises with the broadsword, called *Practices*. We have given one of them, which is to be practised alone; but when the pupil has attained some confidence in the use of his weapon, he must be placed opposite another pupil, and they must go through them, each taking the attack and defence in turn.

The young swordsman must be provided with a very stout wire mask, which defends the face and part of the neck, and which should be worked in a kind of helmet above, to guard against the disastrous consequences of receiving the seventh guard. No practices, loose or otherwise, should be permitted without the masks, as neither party would be able to cut or thrust with proper confidence.

SECOND PRACTICE.

This is very useful in teaching the point and parry, as well as giving steadiness on the feet. Two boys are placed opposite each other, at just such a distance, that when perfectly erect they can touch the hilt of their adversary's sword with the point of their own.

The one who gives the first point is called Front Rank (there may be a dozen in each rank, each having tried the distance to his right by extending his sword), and the one who gives first parry is called Rear Rank.

WORD OF COMMAND.	FRONT RANK.	REAR RANK.
Guard.	Hanging Guard.	Hanging Guard.
Third Point.	Prepare to give Third Point.	Prepare to Parry.
Point.	Give Third Point, and when parried spring back to First Position, and prepare to parry.	Parry Third Point, and prepare to give Third Point.
Point.	Parry Third Point, and prepare for Third Point.	Give Third Point, and prepare to Parry.
Point, &c., &c.		

This should be continued until both are weary. Both swordsmen should learn to do it more rapidly every time they practise. Next time of going through it, front rank and rear rank change places, as they must do in all the practices.

THIRD PRACTICE.

WORD OF COMMAND.	FRONT RANK.	REAR RANK.
Guard.	Hanging Guard.	Hanging Guard.
Leg.	Cut Four.	Cut Seven.
Inside Guard.	Inside Guard.	Inside Guard.
Leg.	Cut Six [at Leg].	Cut Six [at Neck].
Outside Guard.	Outside Guard.	Outside Guard.
Leg.	Cut Five [at Leg].	Cut Five [at Neck].
Guard.	Hanging Guard.	Hanging Guard.
Slope Sword.	Slope Swords.	Slope Swords.

In this and the other practices, the cuts must be delivered in the third position, and the guards in the first. In the third and fourth practices, the cuts must be given lightly, as many of them are not intended to be guarded, but merely to show the powers of the sword in various positions.

FOURTH PRACTICE.

WORD OF COMMAND.	FRONT RANK.	REAR RANK.
Guard.	Hanging Guard.	Hanging Guard.
Head.	Seventh Cut.	Seventh Guard.
Head.	Seventh Guard.	Cut Seven.
Leg.	Fourth Cut.	Seventh Guard.
Leg.	Seventh Guard.	Fourth Cut.
Head.	Seventh Cut.	Seventh Guard.
Head.	Seventh Guard.	Seventh Cut.
Guard.	Hanging Guard.	Hanging Guard.
Slope Swords.	Slope Swords.	Slope Swords.

In this and the preceding exercise, the power of shifting the leg is shown. If two swordsmen attack each other, and No. 1 strikes at the leg of No. 2, it will be better for No. 2 not to oppose the cut by the third or fourth guard, but to draw back the leg smartly, and cut six or seven at the adversary's head or neck.

In loose play, as it is called, *i. e.*, when two parties engage with swords without following any word of command, but strike and guard as they can, both players stand in the second position, because they can either advance or retreat as they choose, and can longe out to the third position for a thrust or a cut, or spring up to the first position for a guard, with equal ease.

It is often a kind of trap, to put the right leg more forward than usual, in order to induce the adversary to make a cut at it. When he does so, the leg is drawn back, the stroke passes harmless, and the deceived striker gets the stick of his opponent on his head or shoulders.

We now come to a very complicated exercise, called the

FIFTH PRACTICE.

WORD OF COMMAND.	FRONT RANK.	REAR RANK.
Draw Swords.	Draw Swords.	Draw Swords.
Inside Guard.	Inside Guard.	Inside Guard.
Outside Guard.	Outside Guard.	Outside Guard.
Guard.	Hanging Guard.	Hanging Guard.
Head.	Seventh Cut.	Seventh Guard.
Head.	Seventh Guard.	Seventh Cut.
Arm.	Second Cut [at Arm].	Second Guard.
Head.	Seventh Guard.	Seventh Cut.
Head.	Seventh Cut.	Seventh Guard.
Arm.	Second Guard.	Second Cut [at Arm].
Head.	Seventh Cut.	Seventh Guard.
Head.	Seventh Guard.	Seventh Cut.
Right Side.	Sixth Cut.	Sixth Guard.
Head.	Seventh Guard.	Seventh Cut.
Head.	Seventh Cut.	Seventh Guard.
Right Side.	Sixth Guard.	Sixth Cut.
Guard.	Hanging Guard.	Hanging Guard.

This practice is capital exercise, and looks very imposing. All these practices ought to be so familiar, that the words of command are not needed, the only word required being First, Second, or Third Practices, as the case may be.

FORT AND FEEBLE.

The half of the sword-blade next the hilt is called the "fort," because it is the strongest place on which the cut of an adversary can be received. Always parry and guard with the fort of your sword, as, if you try to guard a cut with the "feeble," which is the remaining half of the blade, your guard will be forced, and the cut take effect.

DRAWING CUT.

The drawing cut is made best with a curved sword, and is executed by placing the edge of the sword on the object, and drawing it over it until it is severed. A good large mangel-wurzel is capital practice. Place the root loose on a table, stand at arms' length from it, lay the edge of the sword lightly on it, and slice the root by repeatedly drawing the sword over it. This is very difficult, though it looks easy enough, and is sure to jar the arm from the wrist to the shoulder the first time or two, while the sword glides off as if the root were cased in polished steel. However, a little practice will soon overcome the difficulty. This cut is much in use among the Sikhs.

GENERAL ADVICE.

Never look at your own sword, but watch the eye and sword-wrist of your opponent.

Remember that the great point in this exercise, as in fencing, is to gain time. Endeavor, therefore, to advance your point nearer your adversary than his is to you.

Begin the assault out of distance, so that neither party can complain of being taken by surprise.

If the two parties exchange a cut or a thrust at the same moment, the one who gave his cut or thrust in the third position is victorious.

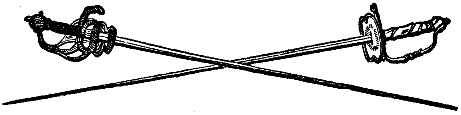
When a cut or thrust is made, the one who receives it passes his sword, *i. e.*, stick, into his left hand, and his opponent comes to inside guard.

Always spring back to the second position after delivering a cut or thrust.

Keep the line of direction carefully, or you will leave an open space for the adversary to get his sword into.

We cannot be too careful to impress upon our pupils the necessity for always making use of the mask in these exercises. One of the best draughtsmen of the present day, who is also a very fine swordsman, lost the sight of one of his eyes through neglect of this necessary precaution.

In conclusion, we beg our young readers to perform their Fencing Exercises with decorum and gentleness toward each other; endeavoring, at the same time, to execute all their parades, etc., with precision and elegance. Let them then exhibit as little awkwardness as possible, and no loss of temper; for ill-nature always mars the pleasure of any pastime.



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